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ABSTRACT

The Bill and Melinda Gates Foundation funds a 5-year program supporting the start-up of new small high schools of no more than 400 students and the conversion of larger high schools into smaller, more personalized schools or learning communities. This report focuses on the program's first year and compares new small schools, large high schools converting to smaller units, and model small schools already in operation. Data were gathered via interviews; observations; and surveys of 12 grantee organizations, 5 model small schools, 8 start-up small schools, and 8 converting schools. Findings indicate that teacher-student relationships in small schools were more supportive than in larger schools. Many start-up schools were still struggling with implementing innovative instructional practices by the end of the first year, but most exhibited teacher professional community and distributed leadership. Starting a new small school is difficult. Many issues of human and material capital in start-up schools were still unresolved. Converting large high schools is a 2-year process, although progress toward positive environments occurred even during planning. Few teachers were included in planning, leading to tenuous support by staff. Planning time in start-up schools and preconversion large schools was generally unfunded. Student and educator responses were more positive in small schools than in preconversions on nearly every measure of school climate. Some grantees had limited leverage to influence the school teams implementing their models. Finding viable economic models was challenging for small schools and grantees. Implications for grantees, schools, the foundation, and the field are discussed. (Contains 59 references) (TD)

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ED 476 004

HIGH TIME FOR HIGH SCHOOL REFORM:

EARLY FINDINGS FROM THE EVALUATION OF THE NATIONAL SCHOOL DISTRICT AND NETWORK GRANTS PROGRAM

APRIL 2003

PREPARED FOR:

THE BILL & MELINDA GATES FOUNDATION
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EXECUTIVE SUMMARY

The vision behind the Bill & Melinda Gates Foundation's National School District and Network Grants Program is nothing less than the transformation of the American high school experience. The initiative seeks to catalyze a shift from large, anonymous, comprehensive schools to smaller learning communities, in which strong relationships between students and adults are combined with challenging, inquiry-based curricula to offer students a learning experience that is at once highly motivating and rigorous and that provides meaningful preparation for college and work.

To this end, the foundation announced in 2000 its commitment of $350 million to a variety of organizations across the country to support school reform. The National School District and Network Grants Program promotes a two-pronged approach: the start-up of new small high schools of no more than 400 students, and the conversion of large high schools into smaller, more personalized schools or learning communities. By funding a wide range of intermediary organizations that support school change, the foundation hopes to promote initial demonstrations of successful schooling models in a wide range of contexts, building eventually to large-scale education reform that will result in a system of school choice for families throughout the country. The initiative has a particular focus on underserved communities, with the goal of creating a more equitable system of learning opportunities for all students.

This report is one of a series that will be produced over the 5-year course of the National School District and Network Grants Program evaluation. The evaluation examines the extent to which foundation-supported schools adopt elements of effective schooling and show better, more equitable outcomes for students. It also investigates the factors that promote or impede school change and its sustained success at scale.

Given the early stage of the initiative, this report focuses on the experiences of educators and students in the first year of operation of new small schools. These experiences are contrasted with those in large high schools planning a conversion into smaller units and those in a set of model small schools in operation before the start of this initiative. We also describe the roles played by the intermediary organizations that are receiving Bill & Melinda Gates Foundation funding to catalyze school change. Later reports will document the initiative as it continues to unfold, following schools as they mature and evaluating student outcomes as those begin to emerge.

Data Sources

This report is based primarily on data collected in the spring of 2002, the second year of this grant program. Information sources include both qualitative and quantitative data. Qualitative data are based on interviews and observations in 12 grantee organizations and in 5 model, 8 start-up, and 7 converting schools working with those grantees. School visits included interviews with school leaders and teachers, classroom observations, and student focus groups. We also interviewed leaders in several districts that were partnering closely with particular grantees and schools.

Quantitative data were collected through surveys administered to principals, teachers, and students at 5 small model schools, 8 small start-up schools, and 8 converting schools funded by the grantee organizations.[1]

Starting New Small High Schools

The eight new small schools we visited in the spring of 2002 were each nearing the end of their first year of operation. Although all were schools of choice in urban districts, they served varied student populations (e.g., between 15% and 98% of their students were eligible for subsidized lunch) and represented varied schooling contexts (e.g., regular district or public charter; in a stand-alone building or housed jointly with other schools or organizations).

Student-teacher relationships in the small schools were deeper and more supportive, both academically and personally, than is typical in larger, comprehensive schools. According to reports from both students and teachers, each start-up school we visited had taken great strides toward creating a positive, caring climate. Students generally felt that, in comparison with their previous schools, their current teachers knew them better, cared more about them, and held higher expectations for their success. As a result, many students told us they were more engaged in schoolwork and the school community than before.

Many of the adults in start-up schools were surprised by the amount of work it took to put such supportive environments in place. Incoming students' negative prior schooling experiences, a high incidence of special needs among these student groups, and lack of readiness for the autonomies that these schooling models offered students all led to the need for focused efforts to establish a positive and orderly school climate.

Many of the small schools were still struggling with putting consistent, innovative instructional practices in place as their first year drew to a close. Our observations within classrooms indicated that some of the instruction in start-up schools was characterized by inquiry-based, in-depth learning; however, these instructional practices were more the exception than the rule. Students were conducting projects in many classrooms, but their assignments varied in the level of student direction and the extent to which inquiry was required. Many teachers told us that they lacked models and ready-to-use curricula for project-based learning and that their students came to the school lacking the basic knowledge and skills that this instructional approach requires. As a result, most of the start-up schools we visited found themselves introducing more structure and direction for incoming students than they had originally planned.

Most start-up schools showed strong evidence of teacher professional community and distributed leadership. Teachers in the new small schools generally described collegial work environments, close collaboration with colleagues, and the experience of working together toward a common vision—a schoolwide professional environment very different from that typically found in large schools. In many of these schooling models, teachers also shared in leadership responsibilities and made collective decisions about important elements of school design.

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[1] Survey data collected from an additional two converting schools were not used because of low response rates. Average survey response rates for schools included in the quantitative analyses were 83% for teachers and 73% for students.

Starting a new small school is an enormously complex, time-consuming endeavor. One of the most common themes we heard from start-up schools was that a personalized learning environment with rigorous learning opportunities for all students takes time to implement. Many of these schools were designed by planning teams that did most of their work in the summer before opening; if planning took place in the preceding year, teachers generally did not receive funded release time for planning activities during the day. The schools described a process of planning and implementation that included a myriad of structural, logistical, instructional, and recruitment tasks, often with a great many unknowns about the specifics of the work that was necessary. Schools whose grantees offered specific models, procedures, logistical help, and curriculum consulting said that these detailed resources were invaluable supports for an otherwise unwieldy implementation process. Those grantees that had a model small school in place before they received their foundation funding were more likely to have such resources available for the schools in their network.

Many issues of human and material capital in schools are still unresolved. Some of the most critical challenges of school implementation and operations involve the development of human and material capital: gathering the resources needed for effective school operations. Significant resources that are often in short supply include finances (small student populations limit the per-pupil funding that schools rely on for ongoing operations), facilities (school design teams found that buildings were difficult to come by and frequently inadequate), and teacher time (in these schools, teachers must balance the roles of instructional leader, personal advisor, and participant in distributed leadership). These issues remain challenging as schools enter their second year.

Converting Large High Schools

The seven large schools in our site visit sample were at different stages of the conversion to smaller communities: one had converted all four grades into small schools at once, one had converted the 9th grade only so far, and the other five were still in planning. This year's analysis of conversions, therefore, focuses primarily on the processes of planning and early implementation, as we do not yet have the data to support a general description of the first operating year of converted schools.

Conversion planning is typically a 2-year process. Design teams for converting schools generally projected a longer planning process than their counterparts in start-ups. Schools that were farther along in the process reported that in the first year they initiated relations with a grantee and organized the conversion effort, forming committees and beginning to formalize their school visions; the second year was generally when specific design activities began. In most cases, however, conversion planning was taking place while school leaders and teachers were still engaged full time in running the existing school. While conversion activities were spread over a 2-year period, funded time to focus on planning was nonexistent or in short supply.

Preconversions are making some small steps toward positive environments even during planning. Most of the preconversion schools had not yet created the kinds of schoolwide structures for personalization (e.g., small teacher-student groupings, advisories) that were commonplace in the small start-up schools. Teachers who saw up to 160 students each day in these large high schools found it difficult to get to know students individually. Nevertheless, staff in several of the preconversion schools described making some progress in instituting a more orderly and respectful environment, including defining norms of behavior and deliberate efforts to maximize personal interactions between adults and students.

Teachers were often not central to instigating the conversion process, leading to tenuous support for fundamental change on the part of staff. Whereas new schools were typically started by school leaders and a hand-picked group of teachers eager to work in a small-school environment, the decision to convert these large high schools was frequently made outside the school, usually at the district level. Although planning teams included teachers, they typically were only a small proportion of those who worked at the school. As a result, many of the teachers we spoke with felt disenfranchised by the conversion process. Some teachers also questioned the longevity of the school redesign effort, wondering whether this would be simply another reform that comes and goes. Other teachers at these large schools, however, were looking forward to the opportunity to provide more personal and meaningful learning experiences for their students, and had high hopes for the changes to come.

As in start-up schools, planning time in preconversions was generally unfunded. Although conversion activities were spread over a 2-year period, in contrast to the briefer planning periods for start-up schools, funded time to focus on planning was nonexistent or in short supply. In most pre-conversion schools we visited, conversion planning was taking place while school leaders and teachers were still engaged full time in running the existing school. School staff told us that this situation led to higher stress and slower progress than might otherwise be expected.

Comparison of Small and Converting High Schools

The results of comparative survey analysis across school types indicate large differences on a host of teacher- and student-reported measures. Because these analyses are cross-sectional in design and there are some possible sources of selection bias that could not be controlled, these findings should not be construed as definitive evidence of a causal connection between school size and student outcomes.

Survey responses of students, teachers, and principals in small schools were significantly more positive than in preconversions on nearly every measure of school climate, professional community, and active teaching and learning. Adults and students surveyed in model and start-up schools rated their schools significantly higher on measures of school climate (e.g., the degree to which schools exhibit close adult-student relationships and respectful interactions among students) and teacher professional community and distributed leadership (e.g., the degree to which teachers share a common vision, work collaboratively, and participate in school management decisions) than did the adults and students in large schools that had not yet begun to convert. Teachers in model and start-up schools reported moderately higher use of instructional approaches characterized by student inquiry and in-depth learning (with larger differences in reported instructional practices between models and conversions), and reported significantly less use of traditional instructional approaches and less time spent preparing for standardized tests.

Responses on teacher and principal surveys in model and start-up schools also were significantly more positive than those in preconversions concerning a number of conditions that may support successful change, including self-reported teacher preparedness for implementing new teaching methods and parental involvement in the life of the school.

Several important intermediate student outcomes, such as engagement and academic self-concept, appear stronger at the small model and start-up schools. On the basis of data from student surveys, model and start-up schools excel on several important outcomes that often lead to longer-term improvements in learning: student engagement, social responsibility, sense of belonging in the school community, and student perceptions of themselves as learners. It is important to note that students in these small schools were more likely to be nonwhite and to have languages other than English spoken in the home than were the students in the preconversion survey sample, differences that would be expected to reduce rather than inflate positive outcomes in the start-up schools. Although we cannot rule out differences in the motivation that families and students in these schools of choice may bring to their high schools, these initial data are consistent with the hypothesis that small schools foster these kinds of positive outcomes for students.

The Intermediary Organizations Creating Small Schools

The schools described above are partnering with 12 intermediary organizations receiving grants from the Bill & Melinda Gates Foundation to catalyze the creation of successful small high schools. The grantees vary in their approach (seeking to promote a design process, design principles, or an explicit school design), their geographic spread (ranging from a single district to a nationwide network), and the number of schools that they expect to support with their Gates Foundation grant (from 4 to as many as 60 high schools). As the initiative matures, it will be possible to compare the relative success of school implementations associated with different grantee characteristics and strategies.

The supports that grantees provide to schools reflect the diversity of their goals and strategies for school reform. Support strategies for schools represent the grantees' beliefs about the most effective ways to influence school reform. Most grantees are providing some level of funding to their partner schools as they begin implementation, and in some cases they are funding planning activities as well; funding is provided either in phases (to allow for accountability) or in a lump sum. Additional types of support offered by many grantees range from strategic assistance (e.g., building support within a community or district) to professional development opportunities for school leaders and teachers. Grantees that seek to replicate a specific school model often provide detailed implementation supports (for example, a student handbook) that schools can choose to adapt; some other grantees feel strongly that schools and curricula should be designed entirely by school staff and based on local needs.

In some cases, grantees appear to have limited leverage with the school teams they expect to implement their models or approach. Whereas several grantees seek to develop a close-knit network of schools with similar characteristics, many others anticipate maintaining looser relationships with the schools they support. Typically, the grantee is one of several sources of school funding and professional development. In many cases, the schools see the grantee as a significant support, but in some cases, the schools view grantee contributions as modest. As a result, the degree of leverage the grantees have in promoting a particular vision of schooling varies widely, as do their stances on how much to try to enforce their own vision in the schools with which they partner.

Grantees are trying to figure out viable economic models, both for their small schools and for their own organizations. Balancing revenue sources and costs is proving a challenge to both the grantee organizations and their school affiliates. Many of the grantee organizations expect to continue to rely on grant-based funding from a variety of sources for the foreseeable future. Some of the organizations are also exploring the feasibility of creating intellectual property based on their school reform work as a way to sustain their operations independent of continued grant funding.

Early Findings and Implications

At this early stage of the initiative, data on student outcomes such as graduation rates are not yet available, and the process of change has just begun. Nevertheless, the organizations taking on fundamental school change under this initiative are amassing experiences that offer important implications for ongoing reform efforts.

Implications for Grantees and Schools

- ***In structuring their work with schools, grantees should consider the leverage they will have with a potential school partner as well as that partner's capacity.*** The extent of a grantee's influence with its school partners depends in part on the extent of philosophical agreement between the two groups. But influence is also increased when the grantee offers resources—financial, intellectual, and practical—that the school views as valuable. Grantees providing more significant funding supports, more specific guidance, and more hands-on continuous coaching are likely to see a greater influence on their schools' designs and outcomes. Mechanisms for keeping abreast of school plans and activities and for establishing accountability further enhance the grantee's effectiveness.

- ***Schools need specific resources and tools.*** School design teams and the staff in new small schools are finding that the nuts-and-bolts issues of school implementation and operation can require tremendous amounts of their time. To the extent that grantees can provide specific materials, procedural descriptions, and tools that their partners can adapt for initial school operations, school staff can turn more quickly from logistical concerns to issues of teaching and learning.

- ***New small schools should expect to devote considerable energy to establishing a positive normative climate during their early years.*** Staff at the start-up schools expressed some surprise at the amounts of time and focus required to put in place the positive, personalized schooling environments they envisioned, in part because of the lack of preparedness among many of their entering students for the kind of instruction and degree of responsibility built into their school designs. Many of the start-up schools and conversion planning teams are moving to models that treat 9th grade as a transitional year, with greater direction and academic support from teachers and a gradual transition to more freedom and self-direction.

Implications for the Foundation and the Field

- ***In structuring future grants to intermediary organizations, the foundation should consider options such as planning grants or gradual ramping up in cases where the proposed work requires organizational capabilities that are not yet in place.*** As grants are negotiated, a grantee's organizational capacity—its human, social, and material capital—is important to consider in light of the nature and scope of the proposed work. Some grantee organizations may need a year for planning and capacity building before starting or converting schools, particularly if their strategy is dependent on the formation of partnerships that are not yet in place. In addition, beginning small-school creation efforts with just a few schools allows for testing and refinement of school models and support strategies before grantees attempt to broaden their reach.

- ***Funders of reform should look closely at the amount of planning time they are funding for the creation of new or converted schools.*** The foundation and its grantees have exhibited sensitivity to the need to provide school teams with supported planning time. School staff report, however, that the activities required for effective school start-up and conversion far exceed the time available. For many, the need to plan new small schools or school conversions while working full time in an existing school has been extremely stressful. Release from at least a portion of their school duties during an extended planning period would be a welcome support for a core of teachers, as well as the prospective principals, for these new small schools.

- ***The ability to make rapid progress by working around the system in starting new small schools may decline as the initiative unfolds.*** Some early activities under this initiative have benefited from being able to work outside the realm of district control or from working with unusually supportive districts. As the initiative scales up, these strategies may become more difficult to implement. Time will tell whether systemic change will be increasingly enabled by successful demonstration of effective models for schooling and supportive district practices, or whether reformers working under this initiative will find the established system more intractable as their work impinges on its core.

As one might expect, our data indicate that 1 year is not enough for full implementation of the kind of learning environments envisioned by the foundation and its grantees. Nevertheless, it appears from these early findings that small high schools of choice do provide an environment with greater personalization and sense of community, even at their outset. Students in these small schools already report being more engaged, feeling more cared for, and having a more positive academic self-concept than their counterparts in large schools. Although we cannot disentangle the role of school size from the role of student choice with the school samples at hand, we can conclude that the early findings described in this report are consistent with the foundation's hypotheses about the benefits of small-school environments that stress close relationships and academic rigor.

The early findings reported here, however, also document how complex and difficult the work of small-school reform is. This report points out several areas, including funded planning time and detailed implementation supports, that may smooth the future path of reform to some degree, particularly as the knowledge base concerning small schools and school conversion continues to expand. Nevertheless, it is important for reformers and funders to set expectations appropriately, and to anticipate a need for extended financial, policy, and intellectual support as school leaders and teachers embark on the important and challenging journey of school improvement.

CHAPTER I

INTRODUCTION

The structure of today's comprehensive high schools reflects the history of public secondary education in America. As the nation moved into the 20th century, high schools were conceived as institutions to prepare students for future lives, and separate programs for academic, vocational, and commercial futures were established (Resnick, 1999). The subsequent progressive movement, and an increase in the number of students to the point where existing differentiated programs could not accommodate them all, led to the rise of the comprehensive high school. Comprehensive high schools were designed to serve all of a community's students in an efficient system offering differentiated educational options within the same school (Lee & Smith, 1994). Critics argue that the comprehensive high school has not played the democratizing function originally intended, however. Less-advantaged students end up in classes with the least experienced teachers and the least engaging curriculum and instruction (Oakes, 1987; Wasley, 2002). Many of these same students drop out of high school before graduation (Greene, 2002). More recently, there has been concern that the standards movement in education, and especially the advent of the No Child Left Behind Act and states' institution of high school graduation tests, will exacerbate the dropout problem unless high schools are changed significantly. As Resnick (1999) has argued, "To establish standards and not simultaneously organize to teach all students well cannot be an acceptable social policy" (p. x).

Common wisdom among educational reformers suggests that, as hard as "breaking the mold" of conventional, mediocre schooling may be for the education system in general, it is harder still at the high school level (Louis & Miles, 1990; McLaughlin & Talbert, 2001). The sense of increased stakes as students near the age for graduation, articulation agreements with colleges and universities, departmental structures, and the bureaucratization that comes with size all work against change and experimentation in today's comprehensive high schools.

THE NATIONAL SCHOOL DISTRICT AND NETWORK GRANTS PROGRAM

In 2000, the Bill & Melinda Gates Foundation made a commitment of $350 million for improving schools across the nation through its National School District and Network Grants Program. Initially, this program had a broad focus; the foundation's education directorate sought out promising reform efforts and provided grants for increasing their scale. They provided grants to a number of K-12 district initiatives, to organizations that provide technical assistance to school reformers, and to organizations that advocate for policy environments supportive of school reform.

As the work unfolded, foundation staff became convinced that the most dysfunctional level of education in America is the high school and that few other public or private education funders were focusing on this important problem. A distinctive focus for the National School District and Network Grants Program emerged. The foundation began funding intermediary organizations to support the creation of new, small high schools and the conversion of large high schools into smaller learning communities (distinctive schools or "academies"). The foundation set for itself the goal of catalyzing the creation of school systems in which parents and students can choose among a set of high-quality, small secondary schools that prepare all young people for college, work, and citizenship in the 21st century.

In funding this work, the foundation is making three central assumptions:

- Small, personalized high school learning environments will lead to better and more equitable outcomes for students.
- Small secondary schools with the attributes of effective schools can be successfully created or transformed through the infusion of outside financial and human resources.
- These reform efforts can be scaled up to produce a substantial impact on the demand for, and availability of, such schools, particularly in challenging urban environments.

GOALS OF THE EVALUATION

In March 2001, the foundation asked the American Institutes for Research (AIR) and SRI International (SRI) to evaluate the high school portion of its initiative. The primary purpose of the evaluation is to explore—and, to the extent possible, test—the basic assumptions underlying the foundation's initiative to transform American secondary education. Thus, the focus of the evaluation activities is the *initiative*, rather than the individual grant or school.

Accordingly, the evaluation has been designed around three research questions corresponding to the foundation's assumptions:

- To what extent do the projects funded (wholly or partially) by the foundation initiative lead to secondary schools and classrooms with the desired attributes and to better, more equitable outcomes for students?
- What factors influence the success of the foundation-supported projects?
- To what extent have grantees developed mechanisms to scale up and sustain their efforts when foundation funding ends?

Although some of the evaluation activities are examining the progress of the foundation's grants to organizations engaged in technical assistance and advocacy for small schools, the main focus of our research is on school change and the grants awarded for the purpose of creating small, effective high schools either by starting new schools or by converting large schools into small learning communities. This report deals with 12 National School District and Network grants awarded between August 2000 and April 2001 for the purpose of starting small secondary schools or converting large ones. The grantee organizations are listed, along with the abbreviated names used throughout this report, in Exhibit I-1. Exhibit I-2 provides a thumbnail sketch of each organization and the goals of its grant.

Exhibit I-1
Grantee Names and Abbreviations Used in This Report

Aspire Public Schools	Aspire
Bay Area Coalition of Equitable Schools	BayCES
Big Picture Company	Big Picture
Center for Collaborative Education	CCE
Center for School Change	CSC
Colorado Children's Campaign	CCC
EdVisions	EdVisions
High Tech High Foundation	High Tech
Model Secondary Schools Project	MSSP
National Council of La Raza	NCLR
New Technology Foundation	New Tech
New Visions for Public Schools	New Visions

The grants for starting or converting schools are typically 5 years in duration, and it is too early in their period of performance to provide answers to the evaluation research questions. This interim report examines just the first 12 to 18 months of these grantees' 60-month work plans. For most grantees, this period has been devoted largely to building organizational capacity, establishing partnerships, and developing procedures and materials. Typically, the grantees plan to work with additional schools each year, and only the first few of their school partnerships were established by the time of our data collection during the 2001-02 school year. Moreover, many of the new schools opened with only one or two grades and were still working out some of the elements of their academic organization during the first year.

Our intention in this report is to capture this early phase of secondary education reform work. Previous research suggests that education reform nearly always takes longer than expected (Adelman & Pringle, 1995), and most reformers advocate planning for at least 5 years for a whole-school reform effort (Levin, 1993; Prestine & Bowen, 1993). Although new schools do not necessarily have to grapple with the cultural change issues that conversions will encounter, they do have to deal with the challenges of obtaining appropriate facilities, securing funding, recruiting school staff and students, and putting in place what may well be an evolving model of academic organization and instruction. On the basis of the experiences of charter schools, we would expect it to take at least 2 to 3 years for the new schools to really hit their stride (Nelson et al., 2000). In this report, we seek to document and understand the early stage of development for both types of school; later reports will put more emphasis on outcomes. To help us put the efforts of large schools planning conversions and new small schools in perspective, we also collected data from five "model" small high schools associated with organizations receiving grants under this initiative. These model schools, all of which were in existence prior to the grants program, represent a more mature version of the school features and the school communities that the grants program is promoting.

Exhibit I-2
Grantee Organizations and Approaches

Aspire Public Schools

Aspire Public Schools is establishing a network of California charter schools that emphasize authentic learning and a balance between constructivism and basic skills. Its strategy is to grow in clusters, with elementary schools of grades K-5 and secondary schools of grades 6-12. Bill & Melinda Gates Foundation funding will be used to cover design and start-up costs for five secondary schools over the next 5 years.

Bay Area Coalition for Equitable Schools (BayCES)

Working with schools in Oakland, California, and surrounding communities, BayCES supports school design teams striving to create new small, autonomous schools and to transform large high schools into small learning communities. In both cases, the goal is equitable learning opportunities and high achievement for all students. BayCES works with the Oakland Community Organization to build support for small equitable schools.

Big Picture Company

The Big Picture Company is creating new small high schools in the next 5 years, based on the model of the Metropolitan Regional Technical and Career Center ("The Met") in Providence, Rhode Island. Big Picture's model school embodies its philosophy of "one student at a time" through individualized curricula based on student interests and passions, authentic learning through internships and mentors, and public exhibitions of student work.

Center for Collaborative Education (CCE)

The Center for Collaborative Education supports networks of progressive schools doing whole-school reform. CCE coordinates five networks, one of which is the New England Small Schools Network (NESSN), which is funded by the Bill & Melinda Gates Foundation. NESSN intends to further the development of the small-schools movement by converting large schools, starting new small schools, and functioning as a clearinghouse and advocacy organization for the movement.

Center for School Change (CSC)

Established 12 years ago within the Hubert H. Humphrey Institute of Public Affairs at the University of Minnesota, the Center for School Change is working with urban districts to support school design teams working to restructure large high schools and convert them into small, personalized schools of choice. With a Bill & Melinda Gates Foundation grant to support work with Cincinnati, St. Paul, and West Clermont (Ohio), CSC takes a community-based approach to designing and implementing programs.

Colorado Children's Campaign (CCC)

Colorado Children's Campaign (CCC), a statewide nonprofit organization, was formed in 1985 to advocate for children. CCC was funded to work with partners across the state of Colorado to: (1) convert several existing large high schools into smaller schools, (2) establish several new small high-tech high schools focused on mathematics and science, and (3) develop a Charter School Network to promote instructional improvement and assessment development among small charter schools.

EdVisions, Inc.

EdVisions provides start-up funding and materials and support to efforts to replicate its model school, Minnesota New Country. The model's design includes a commitment to high-quality, personalized, project-based learning; active partnerships with parents and the community; and systems that are decentralized but stress accountability. EdVisions schools operate on a teacher-owner governance model with a teachers' cooperative offering performance-based, nontenured teacher contracts; professional development; payroll management; and instructional materials.

High Tech High Foundation

High Tech High Foundation is funded to establish nine small charter high schools based on the design principles of the High Tech High (HTH) school in San Diego. The new schools are intended to provide rigorous college preparatory courses with an emphasis on building skills needed in an information-age economy. Instructional design focuses on authentic, problem-based inquiry and real-world application, with required internships and roughly one-third of the teachers hired from industry.

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Exhibit I-2
Grantee Organizations and Approaches (continued)

Model Secondary Schools Project (MSSP)

MSSP was established in August 2000 with the mission of creating new small secondary schools in eight urban districts across the country. Working in Detroit, Compton (California), Boston, Cincinnati, Cleveland, East St. Louis (Illinois), Rochester, and Las Vegas, MSSP supports local school teams involved in designing small schools. MSSP does not impose a school design but rather encourages the planning teams to develop their own designs incorporating the principles of small size; distributed leadership; personalized learning; project-based learning; performance accountability; extensive use of technology; room for talking, movement, and visitors; community internships; and trust and respect.

National Council of La Raza (NCLR)

Established in 1968 with the mission of improving life opportunities for Hispanic Americans, the National Council of La Raza is seeking to develop a large network of charter schools to better serve Latino populations. With Bill & Melinda Gates Foundation funding for establishing 15 small schools, NCLR provides funding and technical assistance to community organizations that meet prescribed eligibility requirements and that seek to start-up or improve these schools. NCLR emphasizes the humanities, Latino culture, bilingual competence, and training in conflict resolution, as well as high parental involvement, small school and class sizes, technological literacy, and high academic performance.

New Technology Foundation

New Technology Foundation was established to provide management and fundraising support for New Tech High School, established in Napa, California, in 1996. With funding from the Bill & Melinda Gates Foundation, New Tech seeks to create a network of nine new Northern California schools with the essential features of the Napa model. These include project-based learning, a culture of respect and responsibility, community internship, and the use of technology to support learning.

New Visions for Public Schools

New Visions was founded in 1989 with the goal of improving the quality of education that children receive in New York City. New Visions is directing the New Century High School Initiative, which has funding from the Bill & Melinda Gates Foundation, the Carnegie Corporation, and the Open Society Institute. This initiative seeks to catalyze systemic processes for transforming education throughout New York City, through a request for proposals from community-school-district partnerships to transform existing high schools and create new small schools.

The first year of operation in the small schools supported with Bill & Melinda Gates Foundation funds is a critical juncture in terms of putting programs in place and establishing the school community. Many of the new schools start with a single grade (typically ninth) and an extremely small staff. Although it is too early to examine student outcomes, the experiences of students and adults in this first year can shed light on the reasonableness of the hypothesis that these schools can be good learning communities for teachers and provide both personalization and rigor for all students. In addition, this analysis can shed light on the expected trajectory for new small high schools—those elements of the design that tend to go into place quickly and those that do not.

DATA SOURCES

After conducting an exploration and analysis of the foundation's goals, operating assumptions, and decision-making needs for the initiative (Shear & Smerdon, 2003), AIR and SRI undertook data collection activities at both the grantee and school levels. An initial set of site visits with foundation grantees, conducted primarily during the late spring and summer of 2001, focused on grantees' organizational histories, goals for their schools' learning environments, activities and progress to date under their grants, strategic partnerships, expected outcomes, and the schools with which they would be working during the 2001-02 school year.

During the spring of 2002, we conducted three major data collection activities:

- Return site visits to grantee organizations.
- Site visits to schools associated with the grantee organizations.
- Teacher, student, and principal surveys in schools associated with the grantee organizations.

Table I-1 shows the population of schools of various types associated with the grantees in 2001-02 and the school samples for surveys and site visits. In selecting schools for our data collections, we attempted to obtain balance in representation across grantees (wherever schools were available), and in cases where a grantee had more than two schools meeting our sample requirements, we consulted with the grantee organization to identify the school or schools that would best typify their work. The original design called for administering surveys in 5 model schools, 10 new schools, and 10 schools undergoing conversion, and conducting site visits in 5 model schools, 10 new schools, and 5 schools undergoing conversion. Several schools were unable or unwilling to participate in all of the planned research activities during the spring of 2002, however, and we substituted site visits to additional converting schools in cases where a new school was unable to accommodate a site visit. Two of the schools administering surveys did not have a high enough response rate from students and teachers to justify inclusion in our data analyses. (Table I-1 shows the number of schools from which data were actually obtained and analyzed.)

Table I-1
School Populations and Samples

School Type	*Number Working with Grantees in 2001-2002*	*Sample for Survey*	*Sample for Site Visit*
Model schools	**5**	**5**	**5**
New small schools[a]	**19**	**8**	**8**
Large-school conversions[b]	**15**	**8**	**7**

[a] Those expected to open in fall 2001.

[b] Those planned for fall 2002 or earlier.

Schools in the survey sample administered surveys to students and teachers. The teacher survey covered topics such as professional background, reform implementation activities, professional development opportunities, and characteristics of the school's climate and instruction. Student surveys probed topics such as engagement with academic content and school activities, interpersonal relations at the school, school norms with respect to behavior, classroom instructional activities, and educational and career aspirations. School principals completed a survey covering topics such as school governance practices, general characteristics of the school learning environment, relationships with parents and the broader community, and supports provided by the intermediary organization receiving the grant from the Bill & Melinda Gates Foundation. Schools also completed a demographic survey concerning characteristics of the school's faculty and student body.

Two-person teams conducted the grantee and school site visits. The site visit teams interviewed the grantee organization's principal investigator and additional staff, such as school coaches or internal evaluators, who could provide essential information concerning the grant's goals and progress. Interviews with grantee staff employed protocols designed to capture information concerning the evolution of the grantee's vision for small schools, the specific schools the grantee was working with and resources provided to those schools, barriers and facilitators encountered in their work with schools, and efforts to build organizational capacity. In cases where the grantee was working closely with a district, a district staff member was interviewed to provide context concerning the community in which the schools operated, district reform efforts, accountability requirements, district perceptions of the foundation-supported work, and any ways in which the district planned to support the grantee's work with schools.

School site visits entailed interviewing the school principal and any other staff member designated as a leader of the reform activities, conducting two student focus groups, interviewing five teachers, and observing four classrooms (where possible, those of teachers who were also interviewed). Both principal and teacher interview protocols covered topics such as conception of the school's mission, supports attributed to the grantee organization, school governance, and academic organization. Teacher interviews probed also for relationships among teachers and between teachers and students, the school's learning environment, and its ability to serve all students well. Classroom observations examined the nature of teacher and student roles in the classroom—the extent to which students were active learners grappling with challenging content. In focus groups, students were asked to describe how their school is different from or similar to other schools, the nature of relationships among students and between students and teachers at the school, the nature of their schoolwork, and their assessment of how well the school is preparing them for life after graduation.

More details concerning the content of the data collection instruments and the methods for obtaining and analyzing qualitative data (interviews, observations, and focus groups) are provided in Appendix A. Appendix B offers detailed information regarding the evaluation's survey methodology, statistical analyses, and descriptive statistics for each student and teacher construct variable.

ORGANIZATION OF THIS REPORT

This report is organized into chapters reflecting different perspectives on the first 2 years of the National School District and Network Grants Program. Chapter II presents the foundation's perspective—the goals of the initiative as it has evolved, the theory of change underlying the initiative, and the foundation's conception of the features or attributes of an effective secondary school. The desired qualities for schools and classrooms are illustrated with examples collected on site visits to model schools (which were part of the inspiration for the initiative).

Chapter III describes the first year's experience of eight newly created small schools. In painting a portrait of the "start-up" small-school experience, the chapter examines the barriers and facilitators these schools have encountered.

Chapter IV presents descriptive data concerning seven large high schools that are in the process of planning or implementing conversion to small learning communities. It documents the experiences of students and teachers in these large high schools (or, in one case, in the small schools created by a conversion effort) and the work of the teams planning school conversions.

Chapter V presents analyses of teacher and student survey data in a comparative context to address three questions:

- Are there differences between the model, start-up, and preconversion high schools on the key attributes of effective schools identified by the foundation?

- Do these schools differ on features that are expected to promote the implementation of the attributes?

- Do these schools differ on key measures of student development?

Chapter VI discusses the initiative in terms of the grantees—the intermediary organizations funded to carry out this work. It describes differences among the grantees in terms of their goals and approaches. The particular approaches and strategies taken by the grantees may, at a later point in the initiative's history, prove to be related to differential implementation progress at their schools. Chapter VI also describes the issues that are starting to emerge with respect to scaling up and sustaining the grantees' efforts.

Finally, Chapter VII discusses cross-cutting issues concerning the implementation of these high school reforms and presents the evaluation team's recommendations for areas warranting additional attention on the part of schools, grantees, and the foundation.

CHAPTER II

THE FOUNDATION'S GOALS FOR STUDENTS AND SCHOOLS

Chapter I provided a brief introduction to the Bill & Melinda Gates Foundation's National School District and Network Grants Program. It described the foundation's efforts to redefine high schools as rigorous but nurturing places where all students can succeed. Chapter II provides additional information about the foundation's goals for high school reform. In Chapter I, we learned that foundation officials hope to redefine high schools as rigorous but nurturing places where all students can succeed. Foundation officials hope to catalyze the creation of high schools where students are engaged in learning, where adults encourage students to struggle with complex problems and ideas, and where students are rewarded for competence, not seat time. The foundation seeks to create enough of these effective small schools to influence public opinion, create demand, and smooth the way for high school renovation.

This chapter provides additional detail about the foundation's goals for students and schools. It discusses the foundation's decision to emphasize 10 attributes of effective schools and classrooms. The chapter shows how the attributes fit into the foundation's theory of change for high school improvement and how they are represented in the broader literature on high school reform. It also defines the attributes and provides examples of their instantiation in a number of schools that served as inspirations for the foundation's initiative.

THE THEORY OF CHANGE

In the spring of 2001, AIR and SRI evaluators began supporting the articulation of the foundation's goals for high school improvement. The evaluation team worked to explore and analyze the objectives, operating assumptions, and decision-making needs of the National School District and Network Grants initiative and to understand the strategies and assumptions embedded in the foundation's plans. The team examined foundation documents and met with foundation staff members (the executive director for education and two program officers who oversee the work of the grantees and the evaluators) to develop a preliminary model of the foundation's theory of educational change (Connell & Kubish, 1995; Shadish, 1987; Weiss, 1995). The team posed a series of questions to foundation officials about their vision for the grant program, their strategies for achieving those goals, and their assumptions about the mechanisms by which these activities would produce school improvement. The evaluation team also asked about possible environmental constraints and about the resource, procedural, and policy challenges that would have to be overcome for the foundation initiative to meet its objectives.

The team articulated the foundation's theory of change, as it stood in 2001. The theory served as a basis for identifying key research questions for the evaluation and for crafting a research design tailored to the vision and goals of the foundation's program. AIR and SRI evaluators held a second session in 2002 to update the theory of change and capture the foundation's evolving plans and the important lessons learned over the course of the year. A high-level summary of the updated theory of change appears in Figure II-1; the full theory is available on the foundation's Web site (www.gatesfoundation.org/education/researchandevaluation/).

The theory is motivated by the premise that large, comprehensive high schools do not serve some students well, particularly because of their lack of personalization, fragmented focus, and low expectations. It suggests that high school students, particularly disadvantaged students, would enjoy better outcomes if they could choose from among high-quality educational alternatives designed to meet the needs of their communities. The theory posits that small high schools can be created that offer high-quality educational choices for all students, particularly those in high-need urban areas.

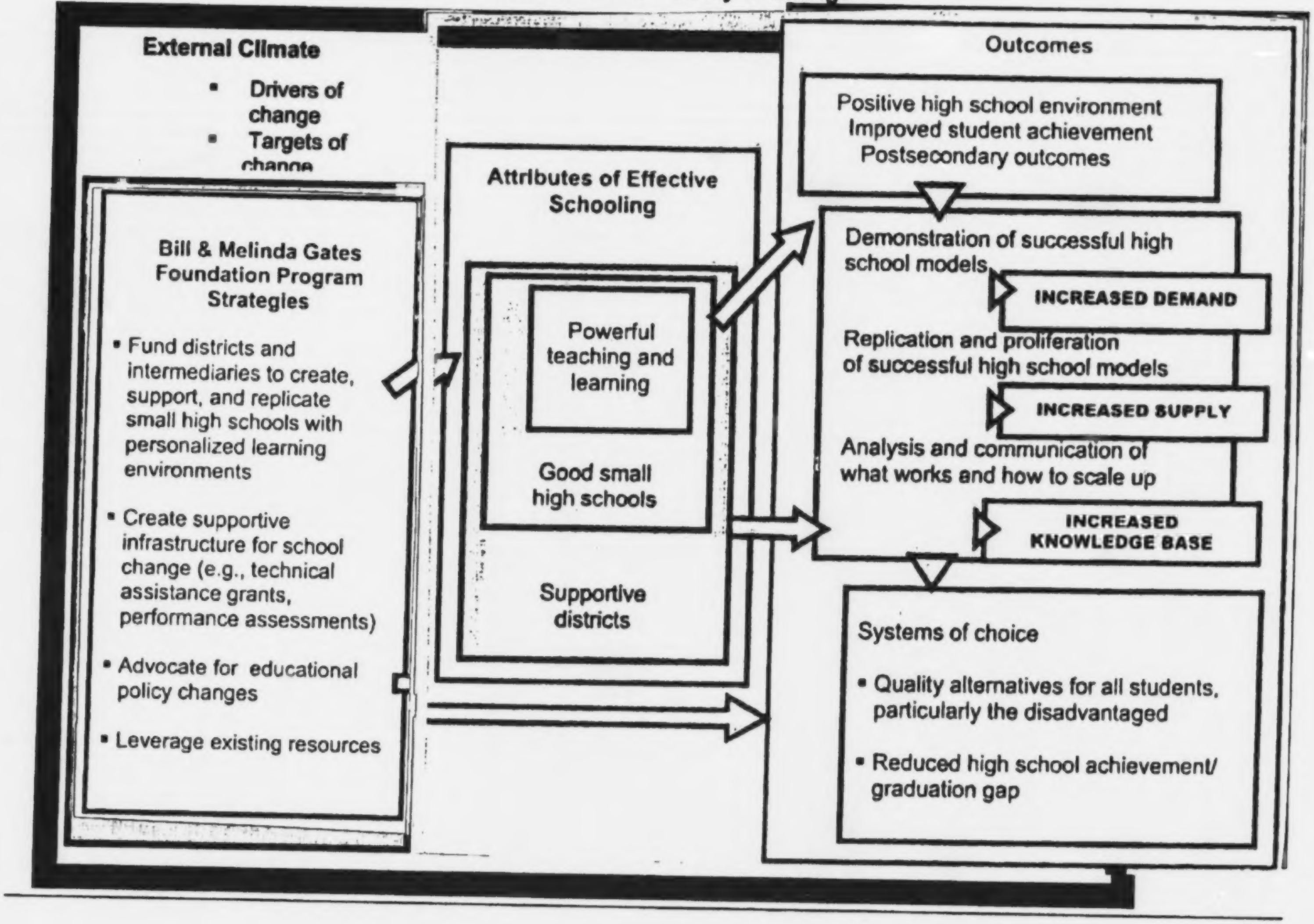
The foundation's theory postulates that effective schools may take different forms, but they share some common characteristics:

- A coherent vision and strategy, shared by all stakeholders.
- Small size (100 students or fewer per grade).
- Seven attributes: personalization, a climate of respect and responsibility, high expectations, performance-based decision-making, technology as a tool, common focus, and time to collaborate.
- Teaching and learning that are characterized by active inquiry, in-depth learning, and assessments that are performance based and support student learning.

In the foundation's theory of change, desired outcomes for students include the demonstration of deep learning, college preparedness, high school graduation, college matriculation, labor market participation, and involved citizenship. The theory assumes that small, successful high schools can become much more plentiful and more generally available than they currently are through the replication of successful school models and coherent approaches to reform within districts. The theory says that broad scale-up is possible if innovation is systemically implemented and supported.

The theory holds that demonstration of the effectiveness and sustainability of small-school alternatives will stimulate demand for such schools. This demand will derive from the demonstration of success and from community indignation over insufficiencies and inequities of the current comprehensive high school model. Importantly, the theory suggests that the proliferation of small schools will be furthered by the establishment of a supportive infrastructure, including, for example, more supportive networks, better aligned performance assessments, additional technical assistance, and better district supports. A more conducive political and resource environment, including reduced reliance on high-stakes standardized tests, advocacy, political recognition of small-school alternatives, and leverage of public and private monies, also will be helpful.

Figure II-1
Initiative -Level Theory of Change


External Climate
Drivers of change
Targets of change
Bill & Melinda Gates Foundation Program Strategies
Fund districts and intermediaries to create, support, and replicate small high schools with personalized learning environments
Create supportive infrastructure for school change (e.g., technical assistance grants, performance assessments)
Advocate for educational policy changes
Leverage existing resources
Attributes of Effective Schooling
Powerful teaching and learning
Good small high schools
Supportive districts
Outcomes
Positive high school environment
Improved student achievement
Postsecondary outcomes
Demonstration of successful high school models
INCREASED DEMAND
Replication and proliferation of successful high school models
INCREASED SUPPLY
Analysis and communication of what works and how to scale up
INCREASED KNOWLEDGE BASE
Systems of choice
Quality alternatives for all students, particularly the disadvantaged
Reduced high school achievement/ graduation gap

Inspirations for the Foundation's Approach

The Bill & Melinda Gates Foundation recently issued a position paper, "Closing the Graduation Gap: Toward High Schools That Prepare All Students for College, Work, and Citizenship," which discusses evidence and research to support the foundation's positions on these issues. The paper describes what teachers and schools can do—with curricula, classroom settings, and teaching methods—to help students learn most effectively. In the following sections, we consider the foundation's assertions as they are articulated in the theory of change and explained in the position paper. We examine the foundation's ideas about effective schools and powerful teaching and learning. We provide detailed definitions of the school and classroom attributes and describe the conditions that support their planning, implementation, and maintenance.

We illustrate the school and classroom attributes by describing the way they look in four innovative high schools. Foundation officials visited these and other innovative high schools in 1999 and 2000. These schools provided the executive director and program officers with inspiration concerning high school renovation. They provided existence proofs for effective high schools and suggested some of the characteristics of exemplary schools. The four schools described in this chapter are: High Tech High, located in San Diego, California, and designed by the educators at the High Tech High Foundation; The Met, located in Providence, Rhode Island, and created by educators at the Big Picture Company; Minnesota New Country, located in Henderson, Minnesota, and founded by educators at EdVisions, Incorporated; and New Technology High, located in Napa, California, and created by reformers at the New Technology Foundation. These schools provide "models" of the educational program promoted by the four organizations, which have been given grants to support the creation of more schools like them. We also refer to a fifth model school in Chapter II and elsewhere in this report. Although it is not a model for an organization that seeks to replicate it, Leadership High School in San Francisco, California, is another preexisting small high school associated with a foundation grantee (BayCES) and representing that grantee's principles. These five high schools have been in operation for between 2 and 8 years. The characteristics of these schools and the students and adults who work in them are shown in Table II-1. Descriptions of the four model schools being replicated appear in Exhibits II-1 through II-4 in this chapter.

Table II-1
Characteristics of the Model Schools, 2001-02

School Characteristics					Teacher Characteristics			Student Characteristics			
School Name	***Grantee Name***	***Community Type***	***School Authority***	***Target Grade Levels***	***Number of Teachers***	***Average Years Teaching***	***Percent Certified***	***Number of Students***	***Percent Nonwhite***	***Percent Eligible for Free/ Reduced-Price Lunch***	***Percent English Language Learners***
High Tech High School San Diego	High Tech	Urban	District Charter	9-12	22	4.8	69	280	55	24	3
Leadership High School[a]	BayCES	Urban	District Charter	9-12	25	6.3	68	335	80	22	0
Metropolitan Regional Career & Technical Center[b]	Big Picture	Urban	State Public	9-12	9	4.2	56	104	66	74	38
Minnesota New Country School	EdVisions	Rural	District Charter	7-12	12	8.2	82	124	7	18	0
New Technology High School	New Tech	Suburban	Public	11-12	10	7.9	100	223	32	4	6

Source: School demographic survey, principal survey, and site visits.

[a] Leadership High School represents the BayCES principles but is not a model for replication by the grantee's school partners.

[b] The Metropolitan Regional Career & Technical Center is a public high school open to all students in the state. It operates much like a charter school, with some autonomy over budget, curriculum, hiring, and student recruitment.

Exhibit II-1
The Gary and Jerri-Ann Jacobs High Tech High Charter School (High Tech High), San Diego, California

School Background. Launched in September 2000, High Tech High (HTH) is a small public charter high school with a 2001-02 total enrollment of 280 students in grades 9-12. High Tech High was founded on three design principles: personalization, adult-world connection, and a common intellectual mission. HTH's mission is to provide students with rigorous and relevant academic and workplace skills, preparing them for careers in an increasingly technological society. One of HTH's goals is to increase the number of educationally disadvantaged students in math and engineering fields.

Student Learning at High Tech High. Academic standards at HTH are demanding. The school's curriculum is tailored to satisfy and exceed the rigorous standards of the University of California system: all students must take 4 years of math, English, chemistry, and history. Students are eligible to participate in an Early College program designed to allow High Tech High students to begin college classes while still attending HTH.

A common intellectual mission is achieved through exposing all students to a rigorous liberal arts education through project-based learning. The school's goal is to offer a single college-preparatory path achieved through heterogeneous grouping of students within classrooms. The school supports this core focus with a sophisticated technology infrastructure, a "great room" outfitted with computer workstations to support student project work and production of digital portfolios, and through its well-equipped laboratories, including separate facilities for computer modeling, engineering, and chemistry. According to one of the school founders, the goal of the school is not to produce consumers of technology but students who can "produce" technology.

Personalization is accomplished through small school size, and the school plans to implement individualized learning plans and an advisory program where students will be matched with a faculty advisor for the 4 years of high school. Personalization in the instructional design also places a high value on teacher-designed curriculum. At High Tech High, the staff are engaged in the collaborative design of the project-based curriculum and are taking a thematic approach to integrate the curriculum across different content areas. With daily shared planning time to focus on curriculum and learning issues, teachers work closely in cross-disciplinary teams to design and implement integrative projects that address learning across the curriculum.

Real-world immersion is sought through using authentic projects, bringing industry specialists into the school, and instituting internships for all students as a graduation requirement.

High Tech High: Reaching Out to the Community. Through its student internship program and outreach activities, HTH has created a variety of community-based partnerships in its short history. A local newspaper partnered with HTH to have students create a Web site on emerging technology, and local museums and community art councils have sponsored student photography and art shows.

School Outcomes. HTH ranks in the highest decile among California high schools overall and among high schools serving similar students. Since its opening, student scores on state standardized testing have been consistently high. With the school's first senior class set to graduate in 2004, administrators expect that 100% of these seniors will apply to college.

Although test scores and school rankings of HTH demonstrate early signs of success, staff and administrators recognize that the school is still a work in progress. For example, project-based learning has proven challenging to students accustomed to learning through more traditional methods. In response, the 9th grade students' entry into HTH has become more structured and transitional to introduce them more slowly to this new learning model.

Exhibit II-2
The Metropolitan Regional Career & Technical Center (The Met), Providence, Rhode Island

School Background. Opened in 1996, The Met is a small public high school whose mission is to educate "one student at a time" to ensure individualized student success and prepare students for their future careers. The Met serves an ethnically and economically diverse student population that perfectly reflects the demography of the surrounding school district (34% white; 35% Latino/Hispanic; 25% African-American; and 74% qualifying for free or reduced-price lunch).

Student Learning by Building on Interests. From the 9th grade until graduation, Met students are grouped into 15-student advisories led by a teacher advisor who facilitates and assesses each student's learning during the students' entire school careers. The goal of the advisories is to create a small, personalized learning environment that fosters close, trusting connections between advisor and student and among students. Advisories meet three days a week, for 90 minutes in the morning and again after lunch. Advisory time is used to develop deeper relationships among advisors and students and among students, and for advisors to meet with individual students to discuss progress toward the student's learning goals. As a group, the advisory plans group service projects and advisory trips, discusses and debates current events, and shares resources, learning trials, and successes.

One of the phrases popular with The Met staff is "one student at a time." Beginning in 9th grade, each student develops an individualized learning plan with the support of an advisor, a parent or significant adult, and, for some students, their internship mentor. Individualized learning plans identify the students' academic and developmental needs and goals for the year, describe authentic project work to meet those needs and goals, and outline expected outcomes and timelines. At the end of each quarter, students are assessed on their progress toward the goals set out in the learning plans.

Internships with adult mentors are the primary pedagogical vehicle at The Met. Beginning the second semester of the freshman year, students are expected to be at their internship site two days each week. Mentors are professionals working in the community or local region in careers aligned with students' interests. Guided by research, informational interviews, and "shadowing" of adults in their place of work, students identify and focus on a personal set of interests that they pursue in the form of real-world projects within internships. Through these internships, students are exposed to the adult workplace and work-related projects and are expected to take on adult responsibilities. The internships and associated project work allow Met students to pursue an area of personal interest while reflecting on their experiences through advisory discussions, reflection journals, and project assignments. The internships also allow for the development of a long-standing mentoring relationship with a real-world professional in the community.

Through their learning activities, Met students are to address five goals that directly connect them to the learning process: empirical reasoning, quantitative reasoning, communication, social reasoning, and personal qualities. To demonstrate learning, students are required to give quarterly public presentations on an aspect of their project work. To assess student progress, advisors give students detailed written evaluations rather than traditional letter grades.

The Met's Success: Student Outcomes. According to its founders, since its opening in 1996, every graduate of The Met has been accepted to college. Compared with other public high schools in the city, The Met has one-third the dropout rate, one-third the absentee rate, and one-eighteenth the suspension rate.

Exhibit II-3
Minnesota New Country School (MNC), Henderson, Minnesota

School Background. Launched in 1994, Minnesota New Country School (MNC) is a small public charter school located in the rural, 1,000-member community of Henderson, Minnesota. Serving 118 students in grades 7-12, MNC enrolls students from Henderson and 11 surrounding school districts within a 50-mile radius.

A primary focus of MNC is to create "a learning community committed to quality, personalized, project-based learning with demonstrated achievement." The school strives to provide a rigorous educational program of learning experiences for students and to engage in an active partnership with parents and the surrounding community.

Student Learning at MNC. One of the guiding principles of MNC is to "personalize teaching and learning to the maximum feasible extent." To facilitate this goal, all students at MNC are grouped in 18-student advisories according to their interests, preferences, and learning styles. Advisories are led by a teacher advisor who meets with her or his advisees at the start of each school day.

The core of the MNC curriculum is a project-based learning model geared to students' individualized learning plans. To foster initiative and ownership in the learning process, students design their own projects in collaboration with parents and advisors. All student projects include active-inquiry components: students conduct research or complete experiments, and create materials or a performance in order to explore a specific issue. Projects must demonstrate student mastery of the 11 MNC learning "profiles," competencies that include and expand on the existing state standards for student learning. Students are asked to reflect on their work and are judged along specific performance-based criteria. Students meet regularly with their advisor in parent-teacher-student meetings, where they work collaboratively to monitor students' progress.

The culmination of the MNC experience is the senior student project. Every graduating senior must give a 30-minute presentation on a project he or she initiated and directed with guidance and help from parents and advisors.

MNC staff state that they hold high expectations, not only for the students but also for themselves. They are committed to creating a high-quality program with excellent teaching and learning. Advisors also take responsibility for managing MNC.

Reaching Out to the Community. MNC has become an integral part of the Henderson community. In addition to contributing to school-sponsored events, community organizations and businesses enable MNC to involve students in real-life, meaningful learning opportunities. Those opportunities include service learning projects, business-school partnerships, and apprenticeships with local community businesses. The director and staff at MNC also collaborate with local university faculty.

School Improvement. To continue improving each year, parents and students of MNC are asked to participate in student surveys to determine what is working well and what areas need improvement. Every summer, parents, students, and teachers of MNC meet to discuss ways to improve for the coming year. Faculty at a local university are conducting a 7-year longitudinal study of MNC graduates, following them into their chosen careers.

Exhibit II-4
New Technology High School (NTHS), Napa, California

School Background. Launched in 1996, the New Technology High School (NTHS) in the heart of Napa is home to 240 students in the 11th and 12th grades from Napa and surrounding areas. The mission of NTHS is to prepare students to excel in an information-based, technologically advanced society. The program encourages students to learn through collaboration with family, business, and community and to develop the resilience necessary to succeed in a rapidly changing world.

NTHS is open to all high school students in the district who obtained at least a C average in their Algebra I class by the end of their sophomore year. To be eligible for enrollment, students and their parents must attend an orientation meeting, and students must submit a formal application.

The New Tech Learning Environment. The New Technology High School environment is designed to feel more like a high-tech company than a typical school. Small class sizes and personal relationships with instructors create an environment where students are responsible for their own learning. Student computer workstations are in clear view around the school, and classrooms have computerized overhead projector screens and long lecture tables.

The backbone of NTHS's unique learning environment is a project-based learning model. This model of independent learning requires that students learn time management and organization skills as they would in a "real-world" career. Rather than hand out daily assignments, teachers assign periodic projects to students with assignment components that may include written essays and digital projects (e.g., Web sites, PowerPoint presentations, or photo essays). Skill-based assessment and digital portfolios are used to judge student performance. Students often work in teams, and team members provide formal feedback to each other concerning their project contributions.

In addition to required math, science, and history courses, all NTHS students are also required to complete four semesters of college courses offered through Napa Valley College, either on the NTHS site or on the college campus.

Strong emphasis is placed on public speaking. Students regularly present their project work in front of their classmates to demonstrate their knowledge. To assist students with this often-intimidating task, the school offers two college-level speech classes that help students organize and put together effective presentations.

Student Outcomes. Since opening its doors in 1996, New Technology High School has graduated 361 students, with 98% of graduates going on to attend postsecondary education. The school's test scores rank in the highest decile among California high schools. According to the principal, students who thrive at NTHS are those who are not afraid to work hard to succeed, and who understand the need to get ahead in a technologically savvy world. As the principal states, "Students [at NTHS] tend to be risk-takers, and they have some vision of where the world is heading."

Attributes of Effective Schools

The foundation's vision of effective schools starts with seven attributes: personalization, a climate of respect and responsibility, high expectations, performance-based decision-making, technology as a tool, common focus, and time to collaborate. These school-level attributes, foundation officials say, create the conditions for powerful teaching and learning that are characterized by active inquiry, in-depth learning, and performance assessment in the classroom. We discuss the seven school and three classroom-level attributes in turn and situate them in a broader research base. Exhibits II-5 through II-13 provide examples of the attributes as they operate in the model schools.

Personalization

The foundation hopes to support high schools in which students and adults have sustained relationships. Foundation officials draw a picture of high schools in which teachers and students work closely together and every student has an adult advocate. The foundation describes personalization within schools as situations where teachers know their students' emotional, academic, and social needs, strengths, and weaknesses and use this knowledge to tailor instruction (CES, 2000). Students in turn feel well known and cared for by their teachers (Arunkumar & Maehr, 1977; Sebring et al., 1996). Adults in these settings encourage and support students' intellectual efforts. In schools marked by personalization, students feel comfortable and confident enough to ask for help, admit errors, take risks, and experience failure as they learn (Lee et al., 1999). Students have a sense of belonging; they feel they are important members of the school community. Some research suggests that personalization is related to academic self-confidence and grades (Roeser, Midgley, & Urdan, 1996; Smerdon, 1999).

Exhibit II-5
Personalization—High Tech High

Ben,[2] an advisor at High Tech High, described personalization at HTH. He said that in advisories, "All the kids . . . have folders with their personalized learning plans. Their goals are there. We revisit them every trimester and talk to kids about what they said they were going to do." When students set their goals, Ben asks them, "How are you going to get there?" He said that in response, "students go back to the course syllabus and find out that there are three tests they need to pass, [they] have to do a project, and there is a presentation of learning at the end." Ben asks his students, "What are your two projects? How are you going to do them?" Ben explained that he goes through the plans for individual students and asks them whether they are on track to meet their goals and the value of this process is that students sit down with adults and learn how to set realistic goals.

Respect and Responsibility

The foundation's attribute of respect and responsibility is described as school environments that are authoritative, ethical, and studious, where teachers model and expect responsible behavior and relationships are based on mutual respect (Sebring & Bryk, 2000). In schools characterized by respect and responsibility, school members share responsibility for one another's well-being and development. Research suggests that students reach higher levels of commitment and effort in schools with these characteristics (Lee et al., 1999).

The literature on effective schools (AAUW and Wellesley College, 1992; Lee, Chen, & Smerdon, 1996) points out that schools with positive climates are also safe and orderly places where students, teachers, and parents feel safe in and around the school. Orderly schools are characterized by students who attend class regularly and rarely engage in vandalism, bullying, or fighting within the school.

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[2] Pseudonyms are used for all names of school staff and students in this report.

Exhibit II-6
Respect and Responsibility—New Technology High

One of the New Technology High faculty, Matt described respect and responsibility at NTHS. Matt said:

"Small class sizes and personal relationships with instructors create an environment in which students are responsible for their own learning. There are no bells telling them when classes begin and end, and no hall passes required to go to the bathroom. It's more like college, or even a workplace, than a high school. . . the atmosphere of trust and respect makes students feel comfortable leaving their backpack behind in a classroom. A seemingly insignificant privilege, it comes at a time when too many students across the country fear that the locker next to theirs may hold a handgun or a knife."

High Expectations

The foundation hopes to support schools in which teachers are dedicated to helping students meet state and local standards, students participate in rigorous study, and students leave school well prepared for success in college, work, and civic life. According to Lee et al. (1999), high expectations and student success are a central element of high-quality schools. They suggest that teachers and students should hold high standards for student learning, for students' work, and for academic achievement. Further, Lee et al. (1999) have found strong relationships between high expectations and student achievement.

In the foundation's thinking about expectations, these extend to all students, with high-quality content and courses that provide all students with equal opportunities to learn to high levels. Foundation officials eschew tracking or ability grouping, relying on research describing how many effective small schools use heterogeneous ability groupings, small group work, and individualized instruction to help meet students' individual learning needs Mohr (2000).

Exhibit II-7
High Expectations—High Tech High

The school leader at High Tech High described the "*culture of achievement*" at HTH. He said that he and his colleagues expect 100% of their students to apply to college. They have developed their curriculum so it maps onto the entrance standards of the University of California. To graduate from High Tech High, students have to take 4 years of mathematics and writing and pass the University of California pretests and posttests in both disciplines. Students also need 4 years of science and history to graduate from HTH.

Performance-based Decision-making

The foundation wants to help build high schools in which students are promoted to the next instructional level when they have achieved competency rather than when they have completed course credits or seat time. Along with the requirement for demonstrated competence, performance-based schools should give students additional time and help when they need it to meet requirements. The foundation's description of this attribute suggests also that data about student learning and outcomes should help shape decision-making about school structures and schedules.

Exhibit II-8
Performance-based Decision-making—Minnesota New Country

Student-directed projects are the core of the curriculum at Minnesota New Country. Students at MNC get project credit by developing and successfully negotiating project proposals and completing the research, writing, development, and documentation laid out in the proposal. Students present their products to project teams and to students, faculty, and family as a requirement of the program. Project teams use performance-based criteria to judge the quality of the work and award project credit. To move to the next grade level at MNC, students need to earn 10 project credits. They also must complete a senior project to graduate.

Technology as a Tool

The attributes of effective schools within the foundation's framework include the use of technology as a tool for learning and communication. The foundation recommends that teachers use technology to design engaging and imaginative curricula that are linked to learning standards, to access best practices and learning opportunities, and to analyze student performance results in ways that inform further instruction. The description of this attribute also includes student use of technology to learn and to communicate and document their work. Schools can also use technology to publish school progress reports to parents and to engage the community in dialogue about schooling and continuous improvement.

Exhibit II-9
Technology as a Tool—New Technology High

Sally, a New Technology High faculty member, described how she uses technology in her classroom:

"The way I use technology in my classroom is to help the students investigate. They use it for research . . . All of our everyday agendas are online or it's on Lotus Notes so the students can check and see what they missed and what they need to do and what we did that day. My grades are online. It's been wonderful for me; it's been wonderful for the parents and the students . . . that's their responsibility to check their grades. It's a time-saver, it's an organizer, but it's not the focus of the classroom. I think one of the important things that the students learn is how to use the technology to make it work for them."

Common Focus

An important portion of the foundation's effective-school attributes deal with common focus, teacher community, and teacher leadership. The foundation holds that schools should focus on a few important goals for student learning and on the successful implementation of these goals. The vision calls for schools in which teachers have a shared understanding of what students should be learning, and the curriculum is organized so that mathematics and English and other subjects are taught in an integrated manner. In schools with a common focus, academic offerings are organized so that the curriculum provides a coherent presentation of knowledge (Fine & Somerville, 1998). Rick Lear, director of the Small Schools Project at the University of Washington, describes such curricula as "elegant in an aesthetic or mathematical sense, with nothing wasted, nothing extra" (2001, p. 1; see Cotton, 2002, p. 26). Electives are deemphasized in favor of a core set of courses.

The foundation's attributes echo the broader literature in calling for schools in which teachers share common beliefs about teaching and adopt a consistent research-based instructional approach (Marks, Secada, & Doane, 1996), aligning the use of time, tools, materials, and professional development activities with instruction.

Exhibit II-10
Common Focus—The Met

At The Met, students and teachers organize their work around internships. The school leaders explained their focus this way:

"Through internships, all students at The Met focus on a common set of learning goals that connect directly to the kinds of learning activities they experience in their internships. Learning through internships is a non-negotiable at The Met and is backed up by evidence demonstrating that tapping into students' interests helps students learn."

One faculty member said she and her colleagues use "internships to open students up to learning goals." Through internships and their associated project work, students focus on five learning goals, including empirical reasoning, quantitative reasoning, communication, social reasoning, and personal qualities.

Time to Collaborate

The foundation identifies time to collaborate as a feature of effective schools. Teachers need time to work collaboratively with one another to give students the best opportunities. The education research literature expands this concept, emphasizing the importance of school environments that have the structures and human resources to support teachers' collaboration, collective reflection, development of standards and expectations, and formulation of plans for action (Kruse, Seashore Louis, & Bryk, 1995). Collegiality is evident in teachers' support for each other within such schools. Collaboration is encouraged among colleagues in the same and different disciplines; teachers "open their classroom doors and share their work with peers, and teachers talk about practice, student learning, and pedagogy" (Sebring et. al., 2000). Opportunities to participate in professional development also help promote professional growth and teacher community.

The literature on school reform describes another important component of teacher professional community—teacher leadership and distributed governance. Teachers discuss aspects of the school's structure, governance, curriculum, and instruction. Research suggests that teacher participation in decisions about school structures and processes is linked to positive school outcomes (Lee & Smith, 2001). Reformers argue that teachers should help make decisions about school programs, curriculum and instruction, teacher professional development, staffing issues, and parent and community connections.

Exhibit II-11
Time to Collaborate—High Tech High

Gary, a teacher at High Tech High, talked about teacher community at HTH. He explained that he and his colleagues meet for an hour each morning before school begins. The four-member multidisciplinary teaching teams (including the humanities, physics, math, and Spanish faculty) meet every Tuesday and Thursday morning to talk about their students and team issues concerning classroom projects, classroom practices, and teacher professional development opportunities. Gary is the senior member of his team and acts as a mentor to his team members on instructional issues.

The faculty meetings on two other days of the week focus on administrative issues. They are led by the principal, vice principal of student affairs, or vice principal of curriculum. At these meetings, faculty talk about policy and procedural issues. Gary explained:

"Decision-making issues that in typical schools come down to the staff from above. . .in this school, these decisions get made in these meetings where we discuss certain practices and whether they are working. If they are not working, 'OK, what are some other proposals?' so that things can be adjusted . . .We have lots of conversations. A lot gets done through community. The community is small. We talk a lot."

The fifth morning is open and often is used to discuss issues that weren't resolved in the other meetings. Alternatively, teachers use the meeting to present and critique student work. In these meetings, the presenting teacher provides others with the students' materials, and the other staff gives their reflections on the work.

Active Inquiry and In-Depth Learning

Learning researchers in education, psychology, sociology, and neuroscience have described instructional practices that help promote student inquiry and in-depth learning (Bransford, Brown, & Cocking, 1999). They characterize active inquiry as learning that begins with students' current knowledge and skills and that draws on student interests and experience to make new meaning. Learning researchers have concluded also that students learn well when they engage in in-depth learning, exploring topics in depth and in a sense becoming subject-matter experts (Bransford, Brown, & Cocking, 1999). The literature suggests that it is important for students to help make decisions about what and how they learn. The research also suggests that learning is facilitated when instructional content has real-life applications and students can connect their learning with participation in community and workplace settings. Making sense of new information and advances in understanding is facilitated through social interactions in which individuals share their thinking. Schools can create opportunities for socially mediated learning by having students present what they have learned to fellow students, teachers, parents, and others outside the school.

A variety of school structures and instructional approaches can be used to promote active inquiry and in-depth learning. These include multidisciplinary instruction, extended learning periods, self-pacing, collaborative learning, mentoring, and community internships.

Performance Assessment

Learning researchers also advocate using performance assessment within classrooms (Bransford, Brown, & Cocking, 1999; Wiggins & McTighe, 1998). They suggest that teachers and students should set clear learning and performance goals and regularly monitor progress toward these goals. An important link between assessment and learning is established when teachers give students feedback on the quality of their work and how it can be improved. Students benefit when they use feedback and reflection to improve their products. Learning researchers also stress the importance of aligning classroom assessments with teaching and learning goals and using assessments to reveal students' understanding and reasoning, as well as their skill levels.

Exhibit II-12
Active Inquiry and In-Depth Learning—Minnesota New County

For her senior project at Minnesota New Country, Caitlin completed a project called, "You be the Jury." It focused on the rights and responsibilities of jurors and the judicial system in murder trials. Caitlin began her research by examining the case of Ann Bilansky, the first and last woman in the state of Minnesota to get the death penalty for murder. Bilansky's trial took place in the mid-1800s. The facts of the case were there: Ann Bilansky was a married woman who'd taken a lover. Her husband discovered the affair and shortly thereafter was found dead. Though evidence about the cause of Bilansky's husband's death was unclear—there was credible evidence pointing both to her husband's suicide and to his death at her lover's hand—Ann Bilansky was charged with murder.

Caitlin created an impressive library of material about the case. She collected legal filings, located newspaper accounts, and interviewed a judge and an attorney about the case. She asked them about the legal evidence, the decision-making conventions of the court in murder trials and death penalty cases, and discrimination in the court system. She compared the circumstances and rulings of the Bilansky case with those of the Salem witch trials, the trials of Madeline Smith, Ed Johnson, Lizzie Borden, and the Scottsboro boys, and the American Beauty case.

Caitlin created three products for her senior project. She created a PowerPoint presentation about her research and what she learned. The presentation gave very detailed information about Ann Bilansky's life, the circumstances that led to her arrest, the legal and ethical issues raised by the case, and the particulars of the trial and the accused's execution. It also provided information about current cases with parallels.

Caitlin also staged a play about the case; the play, written by Jeffrey Hatcher, was called "A Piece of Rope." The play was staged by fellow Minnesota New Country students and performed for the high school, upper-grades students in the elementary school, and the community. Twelve students acted in the play. Students borrowed costumes, makeup, and props from the theater department of a nearby university.

Caitlin followed the play with a visit to the classrooms of the elementary students who'd attended and talked to them about the court system and discrimination. She created worksheets to help them remember what they'd learned about the case, the trial, and the sentencing.

Exhibit II-13
Performance Assessment—Minnesota New Country

Most assessment at MNC is performance based. Students at MNC get project credit by creating products that require writing, performing, modeling/displaying, and/or presenting. Project teams use performance-based criteria to judge the quality of the work. Project rubrics look for evidence of (1) the quality of the research effort; (2) the originality of ideas; (3) the student's effort at acquiring and integrating knowledge, extending and refining knowledge, constructing support and analyzing, using knowledge meaningfully, and reflecting on and improving the work; (4) and time management. Students have these rubrics while they are working on their projects, so they know what they are working toward and can gauge their own progress.

In her senior project, which focused on the rights and responsibilities of jurors, Caitlin addressed three of the Minnesota Learning Profiles: U.S. Citizenship, Themes in U.S. History, and Community Interaction. She sought to answer questions such as:

- Are there any differences between past trials and more recent trials?
- Do U.S. citizens have more rights and responsibilities than they did in the past?
- Are there any concerns that apply to being a U.S. citizen at Minnesota New Country?

Caitlin and her advisor examined her work at various points along the way. With the help of two additional MNC faculty and her parents, they reflected on the quality of the work and evaluated the project in relation to Caitlin's goals and the project rubrics.

PUTTING THE ATTRIBUTES IN PLACE

Foundation officials recognize the complexity of the activities and strategies used by the founders of the model schools, and potentially by other innovators, to put the attributes in place. In the remainder of this chapter, we discuss what it might take to implement the practices just described. This description draws on the wider literature on school change and is a precursor to Chapters III and IV where we describe what we heard and saw in our visits this year to new small schools and to large schools beginning to convert into small learning communities.

Human, Material, and Social Capital

At least three types of capital contribute to organizational capacity at the school level: human, material, and social. In the area of school reform, a few of the most important types of human capital are teacher content knowledge and pedagogical skills, quality and stability of school leadership, and parental involvement in schools. Material capital consists of the resources that organizations can call on to initiate and sustain their activities, including such important resources as instructional materials and adequate physical facilities. Material capital can also be defined to include financial resources. Social capital consists of the network of relationships that organizations have that encourage trust and information sharing and, ultimately, cooperative action. Together, these resources contribute to the capacity of schools to enact educational reform.

Research suggests that the effect of having a stock of human and material capital (and the resulting organizational capacity) on the shape and progress of reform is substantial. For example, we can look at a range of implementation activities that are affected by the capital at a school. Thinking of capacity as a process of problem solving, for instance, we can ask whether school personnel have the human capital for dealing with the inevitable problems that occur as implementation unfolds. For example, do school leaders have the skills for innovating when the model does not indicate particular action? Thinking of implementation as human relations, we can investigate whether school staff have the human and social capital for dealing with interpersonal conflict, team building, and motivation. We can also inquire whether human capital exists in the form of leadership ability (O'Day, Goertz, & Floden, 1995); whether social capital exists for dealing with politics (processes to bargain for resources and to deal with opposing forces); whether human and material capital exist for planning (processes to decide who does what, when they do it, and what materials they have to do it); and whether the human and social capital exist in the school to learn by imitation (processes to facilitate learning from other organizations).

Supportive Contexts

Fullan (1982) argues that environmental conditions also influence the success of reform and refers to such factors as the current state of secondary schools in the aggregate, the climate for education reform that is in place, and the current levels of federal funding available to schools. Assessment and accountability systems that are consonant with reform are also important. At the level of the community, factors such as parents' interest and involvement in the change effort or the business community's interest and involvement will influence the path of reform. Larry Cuban (2001, p. 9) argues that community support is mandatory if reform is to be implemented.

Starting and Converting Schools

The Bill & Melinda Gates Foundation hopes to stimulate the creation of schools with the school and classroom attributes described in this chapter. It expects to support many successful high schools and many different models of small, effective schools. By helping to develop and demonstrate successful high school models, the foundation hopes to increase the demand for high-quality alternatives. At the same time, it plans to increase the supply of successful small high schools by proliferating new school models and replicating them. In the end, it hopes also to increase the knowledge base concerning what works in high school reform and how to scale up for high school improvement.

When we visited schools in spring 2002, we looked for the school and classroom attributes described in this chapter. The next chapter depicts their instantiation in the new small schools we visited; Chapter IV describes the school improvement plans of the reformers we interviewed in large schools on the road to conversion.

CHAPTER III

STARTING NEW SMALL HIGH SCHOOLS

In Chapter II we illustrated the foundation-defined attributes of effective schools through examples drawn from model schools: small schools that have been open for 2 to 8 years. Although these schools continue to learn and to improve their designs, they have had time to put in place most elements of their school models. The same is true of many of the small schools that have been extensively described in both research reports and the popular press (e.g., Meier, 1995; Wasley et al., 2000). In this chapter, we turn to a discussion of new small schools in their first year of operation. Our interest is not only in the product but also in the process: what does it take to create a school that combines rigor with personalization to help all students achieve at high levels?

The eight new small schools we visited in the spring of 2002 were each nearing the end of their first year of serving students, offering a glimpse into the early life of a new small school. Given this early stage of operations, it is too soon to know how many of these schools will ultimately succeed. In this chapter, we focus on documenting the early stage of their development.

Starting a new school, their staff told us, is both an opportunity and a challenge. The opportunity lies in beginning with a clean slate, with designs unhampered by years of history of a particular way of doing things. The challenge lies in the fact that all aspects of the school—structures, processes, curriculum, culture—must be figured out and put in place.

In this chapter, we examine the following:

- Attributes of effective schools and classrooms as embodied in the new schools we visited at the end of their first year.
- The process of planning and opening a small school.
- Challenges that schools have encountered.
- Supports they received from grantees.
- First-year progress.

We begin with descriptions of the eight new small schools that we visited. (Pseudonyms are used for the new small schools throughout this report.)

THE SCHOOLS

To describe the new small schools discussed in this chapter, we draw primarily on interviews and focus groups with students, teachers, and principals. As described in Chapter I, members of the evaluation team typically interviewed the school leader and one or more other adult leaders or design team members, interviewed five teachers of varied classes, observed four of those classes, and conducted two student focus groups, as well as attending any relevant school activities during the period of the visit (for example, a student presentation night or leadership team meeting). We also draw information from two schools where we conducted shorter site visits to interview the school leaders. (In one case, the school felt too overburdened to host a full site visit; in the other, the school's relations with the grantee were tenuous at the time. These schools are not included in school counts because of the incomplete data collected. Examples cited by the principals are used, however, in cases where they are particularly apt illustrations of an issue.) In addition, this chapter makes use of some of the data from student, teacher, and principal surveys administered in the same set sample of schools.

School Contexts

Although all these schools share the experience of having opened in the fall of 2001 as a new school of fewer than 400 students, they differ in a number of ways. Five of the schools (Del Monte, Green Gables, Somerville, Freedom, and Cedar Hill) are standalone start-ups, operating independently in a building that may be shared with other organizations, but not as part of a larger school. One of the schools (Springtown) can be considered a spinoff: it operates in its own building, but many of the teachers and students came from a nearby large high school. One school (Lakeshore) is a school-within-a-school start-up, operating in a wing of a larger high school, with which it shares some resources. Finally, one school (DeSoto) is a reconstitution: it opened in the fall after a spring closure of an unsuccessful small school in the same building. Each variation shapes the task and challenges of opening and operating the new small school.

Table III-1 describes the context and teacher/student populations of each start-up school. More detailed information for each school can be found in Appendix A.

Of the eight start-up schools we visited, five are public charter schools; the other three are regular public schools. All are schools of choice, and all serve urban communities.

Most of the schools chose to use a staging strategy, opening first with the lower grades and adding upper grades year by year. In 2001-02, three of these schools had 9th-grade students only and were planning to add one or more grades a year to serve 9-12 ultimately. Two schools began with grades 9 and 10, and one school that expects to serve grades 10-12 eventually began with grade 10. The other two schools opened grades 9-12 in their first year. In both of these cases, the schools were serving a population of students from an existing 9-12 high school, and they included all grades in their opening year so that they could continue to serve all of those students.

Table III-1
Characteristics of the Start-up Schools

School Characteristics				Teacher Characteristics			Student Characteristics			
School Name	***Community Type***	***School Authority***	***Target Grade Levels***	***Number of Teachers***	***Average Years Teaching***	***Percent Certified***	***Number of Students***	***Percent Nonwhite***	***Percent Eligible for Free/ Reduced-Price Lunch***	***Percent English Language Learners***
Cedar Hill	Urban	District Charter	9-12	8	9.9	75.0	120	72	75	28
Del Monte	Urban	District Charter	9-12	7	3.4	83	50	30	22	2
DeSoto	Urban	Public	9-12	28	9.6	71	351	83	54	7
Freedom	Urban	District Charter	9-12	14	9.2	71	105	95	61	0
Green Gables	Urban	District Charter	9-12	11	5.5	80	108	32	15	1
Lakeshore	Urban	Public	10-12	4	3.8	25	73	Not avail.	Not avail.	Not avail.
Somerville	Urban	District Charter	9-12	10	12.0	100	80	100	98	5
Springtown	Urban	Public	9-12	16	5.9	60	250	99	54	51

Source: School demographic survey, principal survey, and site visits.

Student Populations

Table III-1 also describes the teachers and students of the start-up schools in 2001-02. The largest of the new schools enrolled 351 students in grades 9-12; the smallest had 50 students in grade 9. When operating at full capacity, the schools intend to serve between 120 and 480 students.

Most of these schools serve underprivileged student populations. According to demographic survey data provided by seven of the eight schools, students in five of the schools are more than 70% nonwhite, and in three of the schools the student populations are more than 95% nonwhite. At half of the schools, teachers and school leaders reported that many of their students come from communities that struggle with crime, gangs, and broken homes.

These schools also generally tended to attract higher percentages of special-needs students than found in the typical public school population. According to teacher and school leader reports, two of the eight schools have more than 50% of students who are either diagnosed as having special needs or otherwise in need of counseling services, and staff in several other schools reported that the prevalence of students with critical needs far exceeded their predictions. As this chapter will describe, the populations of students these schools attracted had a significant impact on their schooling environments in the first year.

School Goals

Typically, the goals of these schools as stated by school staff strongly echo the target outcomes and attributes of successful schooling defined by the foundation: staff at nearly all schools emphasized the goals of personalized and safe learning environments with opportunities for active inquiry and in-depth, project-based learning. Rather than striving to be all things to all people like their larger comprehensive counterparts, many of these small schools have chosen a particular focus for students' school experience. Four of the start-up schools have selected an academic focus as an organizing theme, often related to sciences (e.g., life science) or technology. Schools' stated purposes typically relate the theme to course offerings and internship placements, although their goals vary in centrality of the theme to students' experience: staff at one school stated that a primary component of their mission was "to encourage agricultural awareness and understanding among urban students," while at other schools staff described the academic focus primarily as a means to promote academic engagement and lifelong learning more broadly.

In many cases, the diversity of the student population features prominently in the vision and goals of school staff. According to one teacher, "We are concerned about teaching to the whole community, not just grabbing top-end students and providing them a safe haven." Staff at four schools placed a strong emphasis on college-ready graduation for typically underserved students; one of these schools drew its students from a larger high school where, the small-school principal told us, 900 students enter annually as freshmen but only 250 graduate. Other schools placed a stronger emphasis on helping students envision and prepare for a future of their choosing, be it in college or career. One teacher referred to his own role and that of the school as "an option provider… [helping] kids open doors for themselves." The principal at Cedar Hill, a school serving primarily impoverished students, stated the school's educational philosophy as follows: "We're going to believe in them until they believe in themselves."

The next section describes the ways in which these and other goals were instantiated in the start-up schools we visited at the end of their first year in the spring of 2002.

THE ATTRIBUTES OF EFFECTIVE SCHOOLS AND CLASSROOMS

When we visited these schools and talked with the adults and students engaged there, we looked first for evidence of the attributes of effective schools and classrooms defined by the foundation. The sections that follow describe:

- The schools' normative climate as experienced by students and teachers: personalization, respect and responsibility, and high expectations for learning.
- Attributes of powerful teaching and learning that describe the learning environment and instruction in these schools: active inquiry, in-depth learning, and performance assessment. We also discuss in this section two school-level attributes that are closely tied to learning environments: performance-based decisions and technology as a tool.
- The organization of adult life in the school, including teacher professional community and distributed leadership.

As we visited these schools, we also considered their *academic organization*—the ways in which they organized teacher-student groupings, instructional periods, and other elements of school design. In general, the start-up schools took advantage of their lack of a preexisting traditional structure to implement some innovative structures that support close and supportive teacher-student relationships, powerful teaching and learning, and collaboration among adults. Common strategies for academic organization in the start-up schools are summarized in Table III-2 below, and discussed within the sections that follow in the context of the attributes that each structural element supports.

Normative Climate

This section describes the schools' normative climate through three constructs that incorporate foundation-identified attributes of high-achieving schools: personalization, mutual respect and responsibility, and high expectations. School and foundation staff characterize the normative climate they hope to promote as featuring close, personalized relationships between staff and students, mutual respect among and between adults and students, and high expectations for student learning, both from the adults in the school and on the part of students themselves.

Table III-2
Academic Organization of the Start-up Schools

		Structures That Support Personalization			Structures That Support Instruction				Assessments		
School	*Academic Theme*	*Smaller Teacher Student Groupings*	*Advisories*	*Individualized Personal Learning Plans*	*Mixed-Ability Grouping*[a]	*Extended Instructional Periods*	*Mandatory Internships*	*College Course Offerings*	*Competency-Based Promotion*	*Required Student Exhibitions*	*Portfolio Requirement*
Cedar Hill		X		X				P			
Del Monte	X	X	X	X	X	X	X	X		X	X
DeSoto		X	X	X	X	P	P	X	X	X	P
Freedom	X	X	X			X	P	P	X		
Green Gables		X	X	X	X	X	X	X		X	X
Lakeshore	X	X		Not Avail.	Not Avail.	X	P	Not Avail.			
Somerville		X	X	X	X	X	P	X			X
Springtown	X	X	X		X	X	P	X			X

Source: Principal survey.

[a] = Heterogeneous ability grouping in *all* core courses.

X = Implemented.

P = Planned.

Personalization

Site visitors found clear evidence in all start-up schools of close student-to-student and student-teacher relationships.

Each start-up school we visited showed at least some elements of a positive, personalized learning environment. In focus groups, students told us that they felt known and cared for, in contrast to the more distant relationships they had had with teachers in their previous, larger schools. Said one student,

> Teachers know me better than I know myself. They tell me what they see in me and [help me] realize for myself I can do more.

Other students told us that their teachers are "always available," "care if you pass," and make a "special effort to connect with students," even reaching out to students that are treating them with disrespect. "I've never seen a teacher do that before, like make an effort to care about what they [students]'re learning or *that* they're learning."

The eight new schools we visited had instituted a number of schoolwide organizational mechanisms to promote personalization. Advisories were used at six of these schools as a way for teachers to stay in touch with the overall school experience of a set of students, allowing teachers to learn about students' home life, interests, and needs and to offer emotional and social support in addition to academic support. Advisories were small, ranging from 8 to 18 students; they generally met from 2 to 5 days a week for at least 20 minutes, and many of these schools expected advisory groupings to stay intact for multiple years to allow for long-term teacher-student relationships. One teacher described his relationship with the 17 students in his advisory as follows:

> I know where my kids are in progress toward graduation, college or vocational school, their goals. I know immediately if they are absent or have troubles; I call home.

Some schools used other structural means to organize students and teachers into smaller, more personalized multiyear team or family groupings, such as "houses" with separate teacher teams dedicated to students in a lower house (grades 9 and 10) that offers more structure and an upper house (grades 11 and 12) that offers more flexible learning alternatives.

Home visits and conferences with families were other commonly used strategies to increase the personalization of the schooling experience. Teachers at some schools told us that they each met with their advisees' families at least twice a year, enabling them to get to know their students' lives more deeply, to brainstorm with parents about supportive ways to respond to behavioral difficulties, and to engage parents in their students' learning. Said one teacher,

> When we sit down with the parents and the kids, it is nice to hear the parents say the same things that we do… so that we are not sending mixed messages. It has been helpful having their support for students academically and that they really want their kids to do well at school.

In some of these schools, personalization extended to students' academic programs, although we found this to be less widespread by the end of the first year than were personalized teacher-student relationships. According to principals, personal learning plans for some or all students were in place in five of the eight schools we visited by spring of 2002.

There is such a thing as "too close."

Both teachers and students told us that, although close personal relationships were a critical feature of the positive environment in the schools, these relationships came with a cost. "Nowhere in the literature does it explain the consequences of knowing your kids really well," said one school leader. "We've been involved in learning things we really did not want to know." When asked how well he gets to know his students, one teacher responded,

> Too well. They know me too well. [I know my advisees'] home life, their interests, their needs… I have a few students who take advantage of that intimate knowledge.

A number of teachers told us that, in their initial desire to develop strong relationships with students, they had given out home phone numbers and encouraged students to call anytime. As a result, they felt they could never get away, a situation that contributed to teacher burnout. Most of these teachers planned to set clearer boundaries in the next school year.

Some students also expressed reservations about the nature of these closer relationships, saying their teachers or advisors could be too "in your face." The majority of students, however, spoke positively about feeling close to, and cared for by, their teachers.

Respect and Responsibility

The environments of effective schools are orderly and include student-teacher relationships based on mutual respect wherein students exhibit responsible behavior. In many of the schools we visited, creating order in the school environment was an important first step.

Building a safe and orderly school environment was a significant focus of activity in the start-up schools' first years.

Site visitors found that in at least six of the schools a considerable amount of time and energy was spent on the need to create an orderly environment as characterized by regular and on-time attendance and appropriate student behavior. Teachers at one school described the school climate at the beginning of the school year as "chaotic"; at another, they said that students with backgrounds of abandonment, abuse, and negative schooling experiences "started off not even wanting to go to college and not caring about school, and really just fooling around." Said one teacher, "I did not have any idea how bad it was for these kids and how hard it would be to break their old patterns." At many of the start-ups, the unexpectedly high populations of incoming students with special needs exacerbated the problem of unruly behavior, particularly since not all small schools had special education teachers on their lean staff rosters. An additional challenge cited by half of the schools we visited was that, because these schools served only 9th graders or 9th and 10th graders in their first year of operation, they lacked upper-grade students who could serve as role models for norms of behavior and offer a "voice of reason" in the ways of high school.

The strategies used to create more orderly environments varied but included the development of clear rules of conduct, teacher professional development related to classroom management, the use of advisories to discuss topics of concern, and proactive conflict resolution, such as the presence of peer mediators or conflict managers. At one school, staff attributed part of the initial student unruliness to lack of clarity about what it meant for students to "have a voice" in the school; as a response, advisors and students worked together to institute a democratic system of school governance—complete with executive, legislative, and judicial branches—and greater clarity on the difference between adults who make the rules and students who have a voice in the development of those rules.

The amount of time and energy that was required to address "order" caught staff in some of the start-ups by surprise. In addition, this need to create an orderly environment influenced more than just relationships; it also played a major role in determining how and what teachers could teach, both because order is a necessary condition for powerful teaching and learning and because teachers were spending so much time on developing positive student norms of behavior that they had less time to focus on developing instruction.

Nevertheless, adults in most schools described progress being made. In some schools, teachers reported that students were able to work more independently and on more complex tasks during the second half of the year than they were able to earlier on, and one school leader claimed that daily homework completion rates had risen from 10% at the start of the year to 70% at the time of our visit. Students also confirmed that, compared with their old larger schools, the orderliness of the environment was a significant improvement. Said one student,

> [You] don't get as much distraction. A lot of people [that used to go to my old school] have changed dramatically in terms of cutting school. The atmosphere [at the old school] was not stable [enough] to focus on academics and future.

High Expectations

When evaluators visited the start-up schools, they looked for evidence of mechanisms to hold all students in the school, including those that are traditionally underserved, to high standards of achievement, and strategies to assist students in preparing for a successful future in college, the workplace, and the community. A number of formal structures supported high expectations for student behavior and success: one school, for example, had an Intervention Team made up of staff who jointly monitored the performance of the at-risk students and instituted a performance contract signed by a student and parents when a student was failing classes. The most common examples that students and teachers gave for the ways that high expectations were supported, however, drew on the close, caring relationships between adults and students. Students in one focus group told us that while teachers in their previous larger school would "let you fail and see you in summer school," in the small school "the teachers care so they'll stay on your case. They'll call your house, try to give you makeup work to keep you up with the other students," and "help you bring your grade up before it's too late." Another student concurred: "First quarter I had a C, and second quarter I had an A. They'll stay on us until we get it."

At focus groups in three schools of the eight start-ups we visited, when we asked the students if the teachers ever give up on some of the students, students responded that they didn't think teachers ever gave up on students—but "there are some students that have given up on themselves." Indeed, when we asked school staff whether their schools served all students equally well, adults in six of the eight schools told us that the students they had the hardest time reaching were those who lacked motivation and therefore were not taking advantage of the opportunities the school offered. To support high expectations for all students, principals in a majority of schools we visited reported that they have no formal policy of grouping students by ability in core courses, instead striving to offer the same learning opportunities for students of all levels.

Powerful Teaching and Learning

At all of the start-up schools we visited, teachers talked about the classroom attributes of active inquiry, in-depth learning, and performance-based assessment, as well as the use of technology in teaching and learning. Both within and across schools, teachers said they used a mix of traditional and innovative teaching methods. Overall, teachers expressed varying degrees of satisfaction with their progress implementing the classroom attributes during the year.

Our data on the classroom attributes come from three sources: interviews with teachers, teacher surveys, and classroom observations. We briefly describe the classroom observation methods here and provide additional detail about them in Appendix A.

At each of the start-up schools, the site visit teams completed four 25-minute observations in a range of subject areas and grade levels. In all, we collected data on instructional activities in 34 classrooms. Observers collected three kinds of data in the classrooms. We documented classroom activities in narrative form. Observers also used codes to describe the structure of the instructional activities they observed and the roles that teachers and students played in instruction. In the analyses, codes were combined to characterize instruction that followed traditional classroom practices, active but still fairly conventional instructional methods, and active inquiry/in-depth learning. These analyses are described in Appendix A. Finally, observers met with teachers after the class when possible to gather more information about what they had seen. Each of these types of classroom data are reported in this section, along with teacher interview and survey data.

Instructional Practices

In all the new schools we visited, we heard about and saw a mix of traditional and innovative teaching methods. In all eight schools, there were teachers who described traditional teaching methods, teachers who said they tried to teach for active inquiry and in-depth learning, and teachers who reported using a mix of teaching methods.

Active learning was evident in a minority of start-up classrooms.

These reports by teachers were borne out by our classroom observation data. Traditional instructional practices were in use in 42% of the classroom activities we observed. These activities involved teachers lecturing and students listening or responding to known-answer questions, among other fairly conventional teaching and learning practices. For another 41% of the instructional activities we observed, active but still fairly traditional instruction took place. Students participated more actively in these activities—for example, students worked with manipulatives—but the activities were generally aimed at reinforcing previously taught concepts or providing practice on computations, procedures, and skills rather than encouraging student inquiry or deep understanding.

We saw evidence of more constructivist, active and in-depth learning in the remaining 17% of classroom activities. During these activities, students participated in discussions that invited exploration, problem solving, and evaluation; they analyzed and interpreted information, created complex products, or engaged in other work that seemed to provide for active inquiry. Teachers supported students' work by asking probing questions and providing evaluative feedback.

Projects were prevalent in start-up schools, but varied in the depth of inquiry and student-driven activity they required.

In interviews, at least two teachers in every school we visited described their teaching practices as including project-based learning, and we were told that some of the observed activities described above were part of a student project. Within and across the new schools, "project-based learning" held a variety of meanings. For some projects, students played key roles in deciding what they would learn and how they would learn about it. At Green Gables, for example, students helped develop a seminar they called "Minorities of Color" to explore what it means to be a student of color in a predominantly white school. Students designed projects on racism, stereotyping, and multiculturalism and helped decide how to present what they had learned. Exhibit III-1 provides a more complete description of the project.

In other classrooms in the start-up schools, students selected specific topics from within prescribed content areas—in one case, for example, addressing a state science standard in biology by choosing a human organ system to study. In many cases, students worked on projects that were entirely teacher directed—projects for which teachers prescribed the topics and the way students would work on them.

Teachers also supported student learning in start-up schools through multidisciplinary instruction and real-world applications, and innovations in academic structure.

On the teacher survey, almost half of the teachers (48%) in these new schools reported having had their students work on multidisciplinary projects once or more a month. At one of the start-up schools, for example, and in response to September 11th, teachers and students examined questions about Afghanistan's future role in the democratic world. They worked across language arts and social sciences, designing presentations and holding a mock peace conference.

Teacher survey data also highlighted the emphasis teachers place on appeals to students' interests and real-life applications of instruction. Forty-five percent of start-up teachers said they place great emphasis on exploring topics that interest students, and 59% said they put great emphasis on relating instructional content to real-life situations. In one start-up school, the Spanish class went to a local market where most of the vendors are Spanish-speaking so students could talk to native Spanish speakers.

Exhibit III-1
Project-Based Learning at Green Gables

The "Minorities of Color" seminar was a student-driven investigation of what it means to be a student of color in a primarily white school. In the seminar, students conducted research on racism, stereotyping, and multiculturalism; talked about their personal experiences related to race; interviewed other students and adults; debated the issues in personal, historical, and social contexts; and explored options for bringing more minority teachers and students to the school. Students selected topics and conducted research, using "learning circles" to teach others what they learned, and then created body sculptures to illustrate the themes they had explored. In one sculpture about the experience of multiculturalism, the biracial student who had researched the topic (through a set of interviews) stood between two other students who pulled her arms in opposite directions to represent the two cultural traditions between which she was torn, saying, "I'm the right choice" and "It's the better way." A fourth student played the voice of the torn student, saying, "I don't know. Why are you guys fighting? I love both of you!" Students evaluated their work on the body sculpture project and others by using a rubric that focused on presentation skills, knowledge and application skills, organization and problem solving, and production and display. The students performed the body sculpture for other students, teachers, and parents at student exhibition night.

Start-up schools also took advantage of several structural mechanisms to offer broader and deeper instructional opportunities. According to principal surveys, six of the eight start-up schools used extended periods (at least 60 minutes, and more often 85 or 90), a mechanism that can enable inquiry and in-depth learning within a discipline or across disciplines. Four of the schools described internship offerings that are currently in place for at least some of their students (and two principals indicated that internships are in place for all students). These internships place students in work assignments in industry or a career of their choosing for a better connection between school and the real world. Seven of the start-up schools have plans for a mandatory workplace-based internship as a graduation requirement. Although some schools are still building these programs and the community connections needed to find placements for all students, most plan to make internships mandatory in upper grades.

Seven of the eight start-up schools also plan to offer opportunities for students to supplement high school course offerings with courses from local colleges and universities; at least three of the schools have already established formal higher education partnerships. With a common academic focus, a small teaching staff, and longer class periods, the range of courses that can be worked into the school schedule is necessarily restricted; lack of electives and physical education opportunities was a common frustration voiced by students in focus groups. Course opportunities outside the school can help provide more options, as well as providing students with a preview of possible opportunities in higher education.

Many teachers found themselves and their students unprepared for the instructional models espoused in school visions.

When they opened their doors, many teachers in start-up schools were surprised to find that students didn't have the work habits, basic skills, conceptual knowledge, self-motivation, and/or learning strategies required by the instructional approaches the teachers intended to use. Teachers in every one of the new schools we visited said that students were not ready for active inquiry and in-depth learning when the year began. Said one teacher of student preparedness for self-directed learning, "We gave them the freedom to choose what they wanted to learn, and they chose to ask us what to do."

Teachers said they spent time during the schools' first year helping students "learn how to learn"—building skills in inquiry, critical reading, conducting research, and reporting on their work. On surveys, 89% of start-up school teachers also said they put moderate or great emphasis on helping students strengthen their basic reading and mathematics skills this year. One teacher explained,

> You have to start from scratch with students—focus on how to be a student, what it means to be a learner. Many of these students didn't have adequate preparation through their elementary and middle school experiences and lots came . . . with academic skill deficits that have to be addressed while content-specific learning is taking place.

At six of the new small schools, teachers responded to their students' needs by introducing more directed learning experiences than they had planned. Some school structures changed to add more seminars or classes, as opposed to independent time, again to support students with the structure they needed.

Much like their students, some start-up teachers were unprepared to use active inquiry and in-depth learning approaches when they started the year. According to the surveys, only 38% of teachers said that they had enough training to develop instructional strategies that promote active inquiry and in-depth learning. One teacher talked about her difficulty with active learning and project-based learning. She called the transition from traditional instruction to project-based learning a complicated "paradigm shift for kids and for teachers." Teachers said they needed additional instructional resources and models, new ideas, teacher professional development, advice, and additional coaching to put the classroom attributes in place.

Performance Assessment and Performance-based Decision-making

Teachers in the start-up schools used a variety of traditional tests and performance-based assessments in their classrooms this year. On the survey, fewer than 40% of start-up school teachers reported using multiple-choice or short-answer tests one or more times a month. More than 70% of them said they used hands-on demonstrations, exhibitions, oral presentations, and other types of performance assessments once or more often each month. Students created portfolios of their work, participated in debates, created videos and other multimedia products, and gave performances. In four of the start-up schools, students shared their products with parents, reform partners, and/or the community.

Some of the start-up teachers said they used rubrics to communicate what students need to know and do to meet high standards on their projects and to help gauge student progress toward those ends. Many teachers also tried to provide feedback on student work as it progressed so students could revise and improve their products.

As with classroom practices, teachers in start-up schools hoped for additional resources and professional development on performance assessment strategies.

According to the surveys, only 35% of start-up school teachers said they had enough training to design and use performance assessments. Teachers said they hope to strengthen their use of performance-based assessment methods and make sensible use of rubrics as they move forward.

In addition to classroom uses of performance assessments, some schools are using or plan to use performance-based requirements for promotion and graduation to some degree. In addition to state or district exams that students in many schools must pass for graduation, five schools are planning to implement locally developed performance criteria or standards that students must meet for graduation. Some schools are instituting promotion and graduation policies that require students to achieve a Certificate of Advanced Mastery in a set of core academic skills, or that include a minimum number of credit hours toward approved projects as well as credits earned toward state-mandated content standards. Two schools told us of their plans to implement a portfolio review of student work as part of their graduation requirements, and another three do or plan to require students to maintain portfolios but have not yet decided how those will feature in graduation requirements. One school, Freedom High, has adopted a purely competency-based promotion and graduation system: instead of traditional grade levels, students progress through the curriculum by moving through a sequence of courses in each of three core disciplines, and must receive at least a mastery grade to proceed to the next level in the sequence. Demon- strations of proficiency in the core disciplines are also required for admission to Freedom's upper house and for graduation. At this school and at least two others, staff expressed the clear expectation that some students will need an additional year or two beyond the typical four high school years to meet the mastery standards.

Technology as a Tool

On the basis of principal survey reports, at more than half of the start-up schools every teacher and student has access to computer hardware, software, the Internet, and technical support. Instructional use of these resources varies across the schools, however. In some cases, technology is used as an integral part of student research and coursework. More than 50% of teachers in seven start-ups reported having students use technology at least once or twice a month for the creation and presentation of work products. At one school (Lakeshore), for example, students were learning to create an "e-cology" Web site that will host student-written articles reflecting learning in history, English, geometry, and biology in a discussion of the impact of humans on the ecosystems of rainforests in Chile, Brazil, and Argentina. Students at other schools used e-mail regularly to discuss schoolwork or to communicate with an "e-mentor" from the business community, and used the Internet frequently for research.

The most common use of computers in instruction so far, however, appears to be in the area of basic skills development: survey data show that in seven of the start-up schools, more than 25% of the teachers are using technology on a weekly basis to help students reinforce newly taught skills and remediate skills not learned well. For several start-ups, instructional application of technology has been extremely limited in the first year.

Teacher Professional Community and Distributed Leadership

This section looks at attributes of the adult life of small schools, including teacher professional community and distributed leadership structures. Teacher professional community involves a school environment characterized by a strong sense of shared purpose among teachers about the mission of the school as well as sufficient time for teachers to collaborate. In school settings where strong teacher professional community exists, teachers experience multiple informal and formal opportunities for professional learning, collaborate on instruction, work with peers, and engage in open dialogue and reflection about their teaching practice (McLaughlin & Talbert, 2001). In many of the foundation-supported small schools, the work that teachers perform collaboratively extends beyond instructional decisions to the governance of the school, in which all staff play a role.

Teacher Professional Community

Teacher professional community appeared to be an important attribute of the culture and social organization of the start-up schools.

There was widespread agreement across teachers and school leaders in seven of the eight start-up schools visited about the presence of a strong professional community in their schools. Teachers at these start-ups described how their frequent conversations with their colleagues has fostered a collegial environment supporting collaborative planning and development of curricula, increased efforts to help students learn, and improvement of instruction. According to one teacher,

> There's a lot of sharing of ideas. We coach each other along… [Setting graduation standards this summer] was done professionally by all eight of us sitting down at the table and mulling it out over two days.

Another teacher reported that working at the school was like "working with friends." A social studies teacher described how teachers "use each other as resources" to resolve specific problems with student discipline and to plan seminars that are focused on the academic needs of the students. Teachers often described how much more positive they felt about their working environment because they all worked together toward a common goal.

Common focus offers a strong basis for collegiality.

At six of the eight start-up schools, teachers and school leaders emphasized the degree to which staff shared a common vision of what the school was trying to accomplish, offering a shared goal and a common foundation for the work they did together as a community. One teacher put it this way:

> There has been so much division in the traditional schools about [students' education], and I was always isolated in terms of how I viewed it. Here I don't have to worry about closing my door or looking over my shoulder. This has been a wonderful experience since… my colleagues and directors are all on the same page.

Others agreed that being "on the same page" helped to establish feelings of collegiality and guided collective decisions.

In some cases, although school vision was characterized by a strong common focus among staff, the more detailed aspects of school operations were still being negotiated. Staff in at least half of the schools we visited noted that while they agreed on overall goals for students and overall visions of learning, they were still working on consistency in terms of the "nuts and bolts": interpretation of standards, what it takes to earn an A, discipline policies, methods of enacting project-based learning. But, as one teacher said, "[Everybody is] very dedicated and committed to making this a great school—that's where we all meet for sure."

At only one school was there widespread agreement among staff that a common focus for their work had never been established. In this school-within-a-school, teachers reported that the lack of clear vision or goals for instruction, disagreements over teaching philosophy, and feelings of mistrust among staff made it difficult to establish collegial relations among teachers.

Supports for professional community are built into the school day.

In addition to formal workshops, teacher learning opportunities in start-up schools run the gamut from informal sharing of approaches to conference attendance, workshops sponsored by their grantee institution, on-site training workshops, visits to model schools, institutes at local universities, and structured mentoring relationships with colleagues. Many of these sessions offered school staff opportunities to work out issues together. One science teacher described how the grantee-sponsored training sessions in project-based learning that his colleagues had attended led to intense discussions about student needs and how projects should be implemented. Through this process of discussion and deliberation, "we've matured a lot as a staff and accepted those professional differences in philosophies and ideas." By far, however, the most common mechanism for supporting teacher professional community was teachers' informally sharing, coaching, and mentoring each other. Teachers in four of eight start-up schools reported that they shared approaches to different academic and discipline issues, discussed policy issues in staff meetings or during the school day, worked with their colleagues informally to solve problems, and observed each other's classes when they had time.

Most start-ups are allocating some dedicated time for teachers to meet and collaborate on a regular basis during the school day. Many teachers agree, however, that both formal and informal collaboration and professional development were challenged this year by a lack of available time, an issue that will be explored later in this chapter.

Distributed Leadership

Nearly all the start-up schools displayed some form of consensual decision-making and distributed authority.

Structures supporting shared governance and decision-making appeared to be characteristic of the vast majority of start-up schools studied. Although teacher participation in decision-making at one school was limited to the representation of two teachers on a planning committee, more robust distributed governance was in evidence at the other seven schools we visited. Specific decision-making models varied across the schools. At one school, teachers formed multigrade team cadres in which they worked collaboratively on instructional and school management issues. At a small school of only eight full-time staff, teachers made all decisions through consensus. Other schools had committees that included a variety of participants playing important roles in shared governance and decision-making, like a school site council in which teachers served with other staff, students, and parents to plan budgets and develop spending priorities. One of the students at this school acknowledged the participation of students in school governance: "I like the fact that almost everything involves student opinion." Students at other schools participate in Town Hall assemblies and other democratic governance structures or serve on hiring committees.

Many of these governance structures are still evolving. At one school whose collective decision-making was structured in committees, for example, the school leader noted that teachers are still learning to trust each other enough to delegate decisions: "It's important for staff to trust the members of a subcommittee they are not a part of." Although collective governance is a wonderful ideal, this school found, it takes a great deal of time and effort to implement it. In the next section, we consider these and other issues of implementation.

SCHOOL PLANNING AND IMPLEMENTATION

The above sections described the attributes that were in place in these schools by the spring of their first year in operation. We turn now to the question of how they got there: the planning and implementation activities that design teams and staff undertook to move from idea to functioning school.

School planning, in most cases, was accomplished by a committee that included teachers and school leaders, sometimes with input from parents and/or students and sometimes with coaching from the school's grantee. For schools that were beginning from little more than a charter, their task was to envision, design, and implement all aspects of a functional school, from academics and staffing to facilities and detention policies.

This section describes, from the vantage point of the start-up schools we visited, what it takes to open a new small school. Of the myriad of tasks required, this section focuses on those that were most commonly reported to be the primary foci of design team efforts during advance planning and early operations: getting started, raising funds, recruiting and training teachers, managing facilities, recruiting students, developing policies, procedures, and governance structures, developing curriculum, and realigning designs to the student population after the doors opened.

Getting Started

Most of the start-up schools we visited began with an idea and a small core group of enthusiasts. In some cases, school leaders and teachers were recruited or attracted by a notice or RFP from the grantee organization or another sponsor. The university that sponsored one school's charter, for example, issued a postcard describing the new small school it wished to create; other school leaders were actively courted by grantee staff. In other cases, a group of people decided to band together to create something new, either because they were already involved with reform or because they were dissatisfied with their current schooling context. These early teams defined their vision, sometimes with the aid of community focus groups; applied for charters and/or grantee funding; recruited board members and other supporters; and developed a plan. Importantly, in most cases the team included teachers as core participants, so professional community and distributed leadership began to develop from the beginning.

Most planning timetables were very aggressive.

Without exception, the teachers who planned the new schools we visited did not have the luxury of funded time for planning in the year prior to opening. As a result, the most intensive school design activities took place in the summer before the school opened. In the several schools whose design teams engaged in planning during the prior school year, staff were working full-time as teachers in their previous schools and met, unpaid, during evenings and lunch hours to work on design. One design team leader described the process as a "nightmare," and claimed that it worked only because of the passion and dedication of the people involved. As an ongoing model, she said, this is an unrealistic expectation on which to base the success of a school. Although some interviewees also characterized the design process as an exciting pursuit of a new school vision and a valuable opportunity for team building among staff, nearly all agreed that it had been far too rushed.

Planning time was fraught with Catch-22s.

Within these compressed time frames, many activities had to take place concurrently, and required lead times did not always allow for a logical order of activities. For example, several schools' charters were approved in May or June, just a few months before the school was to open. Teacher and student recruitment and procurement of a facility, however, had to begin in the spring and therefore were ongoing activities before schools had a confirmed charter. Planning teams were challenged to design schools and hire the right number of teachers without yet having confirmed figures for student enrollment—a basis for budgeting as well as school design. At the same time, student recruitment was difficult without answers to basic questions like the location of the school and whether there would be a football team.

Fundraising

Without exception, the small schools we visited found that they needed additional grant funding to supplement allocations from federal and state sources and from the Bill & Melinda Gates Foundation. Seeking financing was a task that generally fell to the school leader; help with securing additional funds was sometimes available from the school's board or, in one case, from the grantee.

Schools had varied success in generating the money they needed. Most were able to secure at least some funding from a variety of public and private sources for professional development, books for the library, or a new building. Others found that they lacked staff with experience in fundraising or the budget to hire a grantwriter. As a result, half of the schools we visited reported that they could not afford to hire enough teachers to maintain desired staff-student ratios or to keep on staff teachers with particular specialties—a common need that sometimes went unfilled was a special education teacher, for example. One school leader informed us that the school was forced to rely so far on grant funding to meet payroll, which was not a sustainable strategy. Staff at only one school expressed optimism that after its first year it would be able to finance ongoing school operations within its per-pupil budget.

Recruiting and Training Teachers

Of the eight start-up schools we visited, only two had less than complete autonomy to hire staff because of district-level controls. Other schools were free to establish their own hiring practices. Often this was accomplished by committee; one school, for example, established a nine-person team made up of students, parents, and staff, and asked candidates to submit a portfolio, conduct an interview, and teach a lesson as part of the selection process.

Openings at these schools were advertised nationally, locally, and through word of mouth. Many teachers were attracted through informal networks (for example, based in previous work experience or graduate training). Some were attracted to a well-known name associated with the initiative: the principal, or a prominent researcher associated with the grantee. In the three schools that had each been part of an existing high school, a proportion of the teachers as well as the students were drawn from that school.

Schools had varied success in identifying and attracting teachers who share the school vision.

Nearly all the schools we visited considered enthusiasm for the school model to be an important criterion for hiring. In some schools, this came naturally: said one school leader,

> Nothing is easy, but some of the least difficult was to hire young, experienced, enthusiastic staff who weren't in a rut… When we told them our ideas, their eyes lit up.

At another school, recruiting and hiring were based primarily on the school vision; according to the school leader, all the staff at the school "get it," and most come from alternative schools or were disillusioned with traditional models of public education. The schools with less autonomy over hiring, however, reported less success with recruiting teachers with enthusiasm for their desired teaching model.

Teachers at the start-up schools we visited are typically newer than those at more established schools.

According to teacher surveys, fully 25% of teachers at the eight start-ups had 2 or fewer years of teaching experience by the end of their first year in the new school; this is twice as large as the proportion of new teachers working in schools undergoing conversion. This trend is probably due in part to the greater tendency of younger teachers to be excited by the novel models these schools represented. One school's selection committee, in the words of the school leader, "opted for diversity and enthusiasm over experience." Staff at several schools reported that these newer teachers were challenged by issues of classroom management and other important teaching skills. Some schools accomplished training and enculturation of new teachers through mentor programs and/or a collaborative staff environment that featured a great deal of mutual support. Frequently, however, school communities had trouble finding the time for the needed professional development before or during their first year. In at least two schools, staff reported that in their second year they would be making teaching experience a higher priority in hiring decisions.

Managing Facilities

For six of the eight start-up schools we visited, procuring and adapting a building was an important first step toward becoming a school, and an important priority in the planning phase. The other two were housed in existing buildings, and, although renovations were still critically needed, building procurement was not an issue.

Finding a facility is "the biggest, most draining barrier."

At nearly every school we visited, staff told us of the challenges they had met in procuring, adapting, and financing a space. Particularly in districts that are already strapped for space, buildings are difficult to come by; staff at one school said that they were the only new school in their district that was able to secure a building, and that was only by virtue of very active lobbying efforts on the part of parents. Several of the schools we visited had opened that September in temporary facilities, including a park, a county social services building, and an auditorium within a larger building that was still undergoing renovation. Others had adapted buildings that formerly housed an IRS office or an adult education center, or shared larger buildings with other schools or services. As a result, many of these schools were lacking basic school facilities like an auditorium, a cafeteria, or a gymnasium or other sports facility, although some schools were able to supplement their own physical capacity through partnerships that allowed access to a local YMCA or another school's auditorium. These constraints are forcing school staff to grapple with identifying, in the words of one principal, "the essential facilities needs of high schoolers."

For schools that seek to promote a collaborative, trusting learning environment, an open physical space with room for everyone to gather is essential; such a design is a hallmark of several of the grantees' model schools, including New Technology High School, High Tech High San Diego, Minnesota New Country, and The Met. Although two of the start-up schools we visited had open meeting space as well as individual work areas for students, this was the exception rather than the rule. School staff reported that space issues affected success at a number of levels: students and parents are difficult to attract to a school that has no building yet or that is not visibly identifiable as a school; development of a positive culture in which to learn is challenged by very crowded conditions; and strong academic programs rely on availability of a science lab or library. The principal of one struggling new school, when asked what would define success, listed issues of enrollment, staff capacity, and "having a facility that looks like a school."

Recruiting Students

Schools took a variety of approaches to student recruitment. Two schools that pulled out from a larger school drew their students in the first year primarily from that school, one by lottery and one by accepting most of the students from a particular academy in the larger school that was the source of many of the new school's teaching staff. For most schools, however, recruiting students required active outreach in their target communities. Common approaches included brochures sent to all eligible households, open houses, visits to feeder middle schools, home visits or calls to parents, and ads in the paper. In addition, several schools performed more targeted recruiting through community and church organizations in the communities they wished to serve, including local ethnic communities. One school that deliberately wanted to reach out to students who are often uncomfortable in public schools also recruited through gay and lesbian student organizations and other targeted venues.

Community connections are important for attracting the target student populations.

Schools had varied success in getting to the students they were hoping to serve. One school's origins were driven by a community organization, and at another, staff claimed that the community organization that partnered with their grantee was instrumental in gaining community access and support. In at least two cases, however, all-white school design teams lamented their lack of connections into their target communities of color, limiting their ability to recruit effectively and the trust with which they were perceived by those groups. Another challenge to some was that more open school models tended to appeal more to educated parents, and some minority students left during the year to return to more traditional schooling environments. One school leader said that meeting diversity goals was a "huge struggle." Despite these challenges, as described earlier and as shown in Table III-1, many of these schools succeeded in attracting extremely diverse student populations.

Most school leaders seemed confident that their ability to attract and select students would grow as the school's reputation grew. For their second year, several of the new schools said that they were anticipating the need for a lottery, since it was already clear in May that there would be more applications than available space. One school was planning to hold some slots open to adjust lottery results for diversity in the incoming student population. Schools had also put in place additional programs to introduce applicants more thoroughly to the school, through student interviews, shadowing programs, and application processes that require increased commitment to the school community and its requirements.

Developing Policies, Procedures, and Governance Structures

Staff in many of the new schools we visited were surprised at the range of structural, policy, and administrative elements that needed to be developed as they planned and opened their schools. Because the schools were new, they had none of the structures in place that are easy to take for granted in more established schooling contexts, so all policies and procedures had to be decided on and designed. Structural and procedural elements that some schools found challenging or time-consuming to develop include definitions of the various roles that adults play in school governance and instruction, including career paths, pay scales, and professional development needs; mechanisms for grading, performance assessment, portfolios, and promotions; interpretations of standards, and policies and supports for students who don't meet them; and discipline procedures, to name a few. Schools that started with upper grades as well as lower also had to worry about transcript formats and methods of accreditation in their first year, particularly challenging for nontraditional course formats. In addition, since most of these small schools had minimal budgets for administration, it fell to teachers and school leaders to plan and manage logistical needs. "We don't know how many pencils to order and how much paper," said one school leader; "no one here has been a high school administrator before."

Developing Curriculum

In most of these schools, curriculum development is the responsibility of the teacher.

In seven of the eight schools we visited, teachers were responsible for selecting their own curriculum materials, guided to varying extents by collective decision-making with other teachers; only one school was making centralized curriculum decisions. Many of the teachers said that freedom to teach what they think is best for their own students was one of the things that attracted them to these new school models, in contrast to previous experience in high schools with preestablished curricula and mandated textbooks. Said one teacher,

> As a teacher, I am always nervous about someone else writing my curriculum because others don't have my students. So let me. I am a professional.

At the same time, teachers and school leaders acknowledged several challenges in developing high-quality curriculum. The first is simply time: teachers did not have last year's lesson plans to fall back on, and none of the schools had a complete curriculum in place before the doors opened, so curriculum development had to happen along with all of the teachers' other responsibilities during the school year. Many teachers reported struggling with this responsibility, and one school leader considered it a completely unrealistic expectation:

> It is just overwhelming to build a quality curriculum when teachers are completely drowning, when there is just not enough time to develop it.

A second challenge with teacher-developed curriculum development is coherence of the curriculum. Although several schools tied curriculum to state standards to some degree, or to a set of high-level guiding principles, in most cases it was the teacher's responsibility to decide what content is core to the discipline and should be included in course design. One teacher described the learning in a particular discipline during the first semester as "accidental," for lack of a curriculum to guide instruction, and another said that an important barrier to successful instruction that year was "when you have to decide what content is going to be necessary for the student." To the extent that we heard about effective and innovative curriculum modules, it was often attributed to the skill and judgment of the teaching staff, and to their experience as curriculum designers, a demanding expectation for newer teachers.

Realigning School Designs to Meet Students' Needs

For most of the start-up schools, those that were not beginning with an existing student population, advance planning took place before school staff had a chance to get to know the students. Responding to the needs of the incoming student population and to the unpredicted demands of an operating school was described by one school leader as "fixing the car as you're driving it." At one urban school, staff told us that the unanticipated severity of the academic needs of the incoming 9th-grade students overwhelmed them at the beginning of the school year. According to the principal,

> We didn't anticipate that 12% of our kids would be illiterate. We just didn't... We knew the test scores were low, but we really didn't have a chance, prior to the school opening, to really get to know these kids.

As a result, by the end of the first 2 weeks, the staff found themselves scrambling to rethink and modify much of what they had planned during the summer, including the curriculum, the organization of the school day, and the discipline policy. Other schools found themselves reworking their initial designs for project-based learning, student autonomy, and school governance to develop processes that worked in practice, and that worked for their students in particular. Many of these changes included adding "more guidance, more direction, more scope and sequence" and introductory courses that help students learn how to take responsibility for their own learning.

START-UP SCHOOL CHALLENGES

Although many of the start-up schools we visited were already exhibiting a number of the attributes of successful small schools at the end of their first year, each school had a great many issues remaining to be resolved. In addition to the challenges of implementation described above, we focus here on four other issues that are proving to be ongoing problems for many of the start-up schools we visited: teacher burnout, the fundamental shifts in thinking demanded by these school models, unresolved tensions inherent in school visions, and conflicting requirements from the larger education system.

Some of these issues relate to the school's human and material capital: the people and resources that constitute the school and position it for success. For new schools, issues of capital are particularly salient. Unlike conversions, new small schools often begin without a building, books, and other resources that more established enterprises have accumulated over time. Furthermore, school funding formulas are most often based on the number of students, so schools this small in scale can afford much less in salaries and expenses than their larger counterparts. As this section will illustrate, accomplishing the job of effective personalized learning with scarce resources can be extremely challenging. Some of these challenges have so far been surmountable with some creativity; others remain unresolved at the end of the schools' first year.

Given time constraints, many start-up teachers find their multiple roles exhausting.

Like employees in a start-up business, teachers in start-up schools are often called on to wear many hats. Since many teaching staffs are small, teachers take on a number of nonteaching responsibilities: they share in school governance and decision-making, develop their own curricula, serve as personal advisors to students, and—in some school designs—share school administrative responsibilities as well, such as budgeting and facilities management, in addition to more typical responsibilities for instruction and extracurricular activities. At seven of the eight start-up schools, at least one teacher (and at one school four of the five teachers we spoke to) reported finding the resulting workload overwhelming:

> It's the fact that you're advising students, you're trying to prep for the class that you're going to teach while the students are still there. I'm trying to do my administrative and finance work so the school doesn't go under... There needs to be a balance.
>
> It's been brutal, to be honest with you... It's been really, really hectic and I'm exhausted most of the time.
>
> It's not sustainable, what we're doing right now. I think everybody made a commitment to work incredibly hard for a year, maybe two, [and then see how it goes].

Some teachers expressed the hope that this experience was "freshmanitis," and that next year there would be more of a routine with more of the requisite curriculum and processes in place. It is clear, however, that it will still take work at some of these schools to develop sustainable staffing models.

In addition to individual teacher workloads, school staff reported frequently that time was lacking for the staff as a community to make group decisions and implement policies. In many schools, hectic school days did not allow for common planning time in the regular schedule; when it existed, staff at these schools reported that there were more issues than time available to resolve them, and that long-range planning or larger process development often had to take a back seat to immediate practical needs. Said one school principal on the topic of processes for staff evaluation, "Much of this is not determined. We have to wait until we open this conversation during the summer because we are busy right now trying to run the school."

These school designs demand a fundamental shift in how school staff, students, and parents think about teaching, learning, and school governance.

The school designs described in this chapter are fundamentally different from traditional ones on a number of dimensions: instruction, adult-student relationships, and school leadership, among others. Several of the people we interviewed spoke of the "paradigm shift" that such models required. Said one teacher,

> The biggest challenge for everyone involved is the paradigm shift—to believe in the design of the school and the research and reasons for the paradigm... Our whole staff isn't behind project-based learning and the concepts of the school. Not all students and not all parents are behind it either.

According to school leader reports, particularly challenging to staff new to their school models are project-based learning, student-centered classrooms, and adopting the belief that "even disadvantaged kids" can really succeed.

School models include a number of unresolved tensions.

In their first year, most of the start-up schools we visited encountered tensions when they tried to put their principles into practice. These included balancing:

- freedom and autonomy with support,
- close interpersonal relationships with discipline,
- focused academic programs with variety and choice, and
- standards and university requirements with project-based learning and student-centered classrooms.

One of the most challenging balancing acts inherent in the enactment of the visions of these small schools was the need to support each student's achievement at his or her own pace while simultaneously maintaining equally high expectations, and equal opportunities, for all students. Many of the start-up schools have chosen to organize students in mixed-ability groupings to reduce the inequities so frequently inherent in tracking systems. At the same time, however, the schools are grappling with how to meet expectations from high-achieving students and their families for AP and honors offerings, and some high-achieving students we spoke with told us that they or some of their peers were considering leaving their small school to seek more advanced course offerings. A similar challenge is inherent in performance-based promotion policies, which have the potential to divide the student population into a group demonstrating mastery, qualifying for promotion to the next level, and a group that needs to spend more time on the more basic material. At Freedom High, a school with a promotion policy based entirely on mastery, the school leader asks,

> What do you do when 80% of the kids are getting it and 20% of the kids keep repeating 101? What do we do with that 20%? I would love it if I could pick up the phone and talk to someone about what we're doing but I don't know anyone who's done it yet.

Some state and district requirements conflict with small-school goals.

Although start-ups had the freedom to plan their school models unhampered by precedent, they still had to work within a larger educational system whose systems and practices are still largely traditional. School leaders encountered a range of contextual challenges. In some cases, public schools were not granted autonomies over hiring and budgets; even when those autonomies were in place, not all district-level practices and systems were in place to support them (for example, one school leader reported difficulties with district financial systems that could not accurately handle school-based budget autonomy). Others were subject to mandated student-teacher ratios that challenged personalization goals, requirements to report student accomplishments in terms of seat time, and reduced funding for students who spend more than 20% of their time off campus (a policy that conflicts with internship programs).

At other times, challenges were due more to lack of support from district personnel. In one district where school staff perceived that the superintendent had educational goals that were incompatible with their school model, directives from the district, the grantee, and the school's founders seemed separate and often contradictory; one example was the unresolved conflict between student-driven and standards-based approaches. "You feel like a hamster just spinning your wheel," said one teacher about trying to effect positive change in this confusing environment; another teacher said, "I feel like I'm a ping pong."

GRANTEE SUPPORTS

School design teams and school staff in their first year received assistance from a number of sources, including their Gates Foundation grantee, university and industry partners, and other funders and support providers. Chapter VI presents the assortment of grantee supports from the perspective of the grantees, discussing what they chose to provide to schools and how those choices are shaped by the grantees' visions of school change. This section will focus on school staffs' perceptions of the support they received from grantees, and which supports were most helpful.

The grantees that supported the schools we visited delivered a wide range of supports, from leadership coaching to detailed implementation help. Aside from the monetary grants the schools received, the supports they considered most helpful fall into several categories: conferences and workshops, leadership coaching and strategic support, and specific models, tools, and development support for instruction and operations.

Conferences and workshops helped jump-start collaborative school design.

Many grantees offer conferences or workshops to schools with whom they partner. For the start-up schools we visited, these conferences were most often cited as helpful when they kicked off the design process early in summer. Staff at one school described the kickoff conference they attended as instrumental to their process of forming a functional team, with norms for facilitation and decision-making, so that they could proceed productively with collaborative school planning. Staff at two schools, however, dismissed their summer retreat as timed too late in the summer to be of help in planning or targeted more toward a breakup situation than a new school.

Leadership coaching and other strategic supports promoted productive discussions of important issues.

School leaders found several forms of leadership development extremely helpful, including leadership meetings that brought principals together to discuss common visions and critical issues, and coaching to help them with their own leadership issues. In addition to individual coaching for school leaders, some grantees worked with schools' leadership teams on visioning, governance, and teamwork. According to a design team member at one school, initial conflicts among the staff during the design process were "startling," with many disagreements on philosophical issues such as curriculum and governance. The grantee's coach, they said, was a "godsend" and could always be counted on to be available, ask "the hard questions," and facilitate important strategic discussions to help them stay focused on shared beliefs and goals for the students ("the why behind everything") as they shaped school policy and solved immediate practical problems. "[She] asks the right questions without restricting us to any particular model," said one teacher.

School staff also reported benefiting from other types of strategic support from grantees, including networking, fiscal management, and relations with communities and districts; these and other strategic supports are described in Chapter VI.

Specific models, tools, and development support for instruction and operations were essential for a smooth start.

As discussed earlier, development of curriculum and school policies was often an overwhelming task for new schools. EdVisions, a grantee with a model school, facilitated relationships between its model and new schools, offering direct resources and guidance in the nuts and bolts of school design and implementation. Staff at one school, for example, reported that they were able to clone the student handbook from model school Minnesota New Country and have it ready before their school opened, and they patterned their seminar and independent-project structures, including project proposal forms and credit policies, after those used in the model school. One teacher said that visits and supports from the model school were "invaluable": there was "no way" their team would have been able to invent all of those elements on their own in the time available for planning. The grantee made available all the paperwork and specific "how-to's" without being prescriptive about their use, so schools were free to adopt or adapt those materials as they chose. "We got off to a very strong start because of EdVisions," said the school leader. Another school was able to leverage and adapt forms and policies from the model; said one teacher, "We are a better school because we didn't go first."

Other schools benefited from coaching on specific curriculum development issues that was supplied either by the grantee or by staff at a university closely affiliated with the grantee, including monthly support meetings to design advisory group activities and individual in-classroom coaching of teachers. Said one teacher,

> I believe that every teacher needs this kind of support because the learning curve is steep. That extra support helps to tackle things rather than just being overwhelmed by them.

The schools described above that received very detailed coaching in the "how-to's" of opening a school reported that this type of help was indispensable for a smooth start. By contrast, some grantees provided high-level coaching and guidance on vision but left the details up to the school design teams to figure out. In these schools, staff said that they spent much of the year struggling to fight fires. The principal of one struggling school said that starting a school was a huge job, and one could not anticipate much of what needed to be done, and that support from the grantee in predicting what school start-up required and designing elements of school structure would have been extremely helpful. Instead, staff reported that they were unable to take advantage of the leadership coaching offered by the grantee because they were too busy with operational necessities. Frequently, teachers were left to figure out how to implement desired pedagogy or school organizational structures on their own. One teacher, for example, said the staff received no training on personalization or meeting individual learning needs, and she hadn't yet figured out how to create individual learning plans for all 80 of her students. Another school leader described a "dying need" for curriculum appropriate to the school's low-achieving students that was not supported by the grantee.

Closeness of school-grantee relationships varied greatly.

Two of the schools we visited associated their identity and vision very strongly with those of their grantee. Staff at a school funded by Aspire, for example, said:

> You cannot function without Aspire. We are an Aspire school. Aspire is like the district office, plus… Aspire provides a culture piece… I am part of the Aspire culture, and I can work at any Aspire school because this is my district and my culture.

Other schools ranged broadly in their closeness with their grantee. Some viewed the grantee as an important source of vision and support. Some relationships were more distant, with infrequent contact between grantee and school; in these schools, not all teachers we talked with were aware of the grantee's role in support of their school. In the case of Freedom High School, school leaders viewed grantee staff as "kindred spirits" and were happy for their partnership, but had fundamental disagreements with the grantee about instructional approaches, one of the factors that led the official affiliation to end by the completion of the school year. On principal surveys, principals at four of the new schools indicated that they had had frequent interactions with grantee staff over the course of the year,[3] including in-person visits or meetings, phone calls, and/or e-mail communications. At two of the new schools, principals reported fewer than five of each of these types of contact with their grantee over the course of the year.

Interviews with school staff implied several reasons for distance between schools and grantees. In many cases, school planning began prior to collaboration with the grantee. One school, for example, already had a strong board, start-up funding from other sources, and a school design before beginning work with the grantee. Staff considered their model to be consistent with that of the grantee, so the relationship was synergistic, but the grantee was only one of many sources of inspiration and funding. A second reason for distance is level of funding: schools received a wide range of funding from their grantee, in one case as little as 9% of the school's operating budget, an amount that wields little clout. In three cases, schools told us that they had thus far received no funds whatsoever from the grantee. The leader of one school that was located in a different geographic area than the grantee indicated that they had less benefit from the grantee's community contacts than schools located more closely. Finally, at two schools, differences of vision emerged, with school leaders or individual teachers choosing to go in different instructional directions.

Most schools supplemented the support they got from the grantee with other sources of guidance: for example, schools received professional development related to a literacy grant from a local foundation, detailed training and support related to a project-based learning methodology or basic reading program from the provider of the program, graduate student mentors or consultants from a local university, district staff development on teaching diverse groups of students from their district, and subject-specific help from corporate partners. Some of these supports were complementary to those offered by the grantee, but at other times they offered alternative approaches that loosened the relationship with the grantee.

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[3] On a survey, principals were asked to estimate on a 4-point scale (with 4 = "more than 10 times") the frequency with which someone from the grantee organization had visited the school, communicated with them by phone or e-mail, or met with members of the school staff. Total interaction frequency was determined by summing across these three items.

Despite the challenges they faced in their first year, each of the start-up schools we visited was able to make great strides toward a personalized, successful small school. We close this chapter with a reflection on how far they came, and what steps are next.

FIRST-YEAR PROGRESS

It takes longer than a year to create a school. Each of the start-ups we visited in the spring of 2002 was considered by its staff to be a work in progress. According to school leaders at two start-ups at the end of their first year:

> We are about halfway to implementing the model we want. We have the hard-hat part of it done. But now our job is to tweak it, refine it, and make it better.
>
> Year 1 of any organization is about acculturation and training of students into the way you do things, [instilling] your procedures and rituals into the community, and then you build [on that in] Years 2 and 3. Year 4 is really when kids show what they know; Year 4 is the way you planned the school.

Indeed, the most striking results evident after a year of enculturation and training at these schools were the personalized, positive environments that school communities were able to put in place. In at least five of the eight start-ups we visited, students and/or adults used metaphors of "family" and "home" to describe the school, terms that were often associated with feelings of closeness and safety:

> Kids get along with each other. [My old school] had riots every other week. And racism. Here we get along, [like a] big family. Everybody knows almost everybody around here, and people try to take care of each other. [*Student*]
>
> The students have meshed and come together into a family. They work together, and they take care of each other. [*School leader*]
>
> We have great attendance rates. Kids want to be here. They stay late; we can't kick them out… I think we have a place that feels like home to a lot of kids. [*School leader*]

A number of other school-level outcomes were mentioned by adults and/or students in at least six of the eight schools we visited, including improved student attendance in comparison with previous schools, fewer fights (one teacher compared the current school's four or five fights this year with his previous school's two or three fights each day), and higher levels of academic engagement, among others. In terms of student academic achievement, although there are a number of individual success stories, it is still too early in the lives of these schools to expect or to measure overall academic outcomes.

Teachers, too, had many positive things to say about their jobs. Although many experienced burnout this year, they also told us that being in the school is "energizing," that deep bonds with other teachers offer a sense of community that they had not experienced in previous jobs, and that they felt "professionally renewed." Said one teacher,

> This job is a lot harder than my old job, but I'm a lot happier here professionally… I see myself as an educator and creator. I like to be part of creating change instead of just being in the classroom doing my own thing. It's been a lot of hours, but it's definitely been positive.

With the basics of a positive environment in place, school staff told us that they are turning now to formalizing the policies and procedures they have developed so that they can move to a focus on forms of teaching and learning that build on the personalized relationships and norms that have been established. Said one teacher, "When the dust settles, how do you improve instruction?"

CHAPTER IV

CONVERTING LARGE HIGH SCHOOLS

In addition to the start-up schools described in the preceding chapter, the evaluation team visited seven large high schools in spring 2002. We wanted to learn what happens as these large institutions convert into smaller schools or academies. Two of the schools we visited had already been divided into smaller units. One of these, Sullivan,[4] gave us an opportunity to see what happens when an entire school converts at the same time. The second school, Community, formed a "small school" only with its 9th grade, thus providing us with a window on change that is staged or evolves over time. (Plans at this school called for complete conversion by the fall of 2002.) From the remaining five schools—Von Humboldt, Logan, Campbell, Western, and Clearwater—we learned some of what adults and students in these schools think about and do as they ready themselves for conversion.

This chapter begins with a section on the schools, which provides some general information about students and schools in our sample. The section on the attributes of effective schools and classrooms touches on the extent to which the workings of these schools were consistent with the attributes defined by the foundation. (See discussion of the foundation's theory of change in Chapter II.) Three subsequent sections address what evaluators learned about the change process. The first, "The Conversion Process," describes some of the steps taken by adults connected with these schools to begin or continue school conversion. The next section, "Conversion School Challenges," addresses adult and student perceptions of what complicates the change process in these schools. The "Facilitators" section then discusses those activities, attitudes, and processes that help move the process along. This chapter ends with "Early Lessons," a brief presentation on what can be learned from these schools.

Chapter III provided an in-depth discussion of what our evaluators learned about normative climate, classroom attributes, and teacher professional community and distributed leadership in the eight start-up schools. That discussion examined changes that had already occurred within these three areas in the various schools, as well as plans for changes that would strengthen these aspects of the schools. In contrast, evaluation teams that visited the large high schools saw what they expected to see: traditional large high schools as they have been described in countless research studies. The most interesting findings about these schools concern their preparations for converting their large, traditional structures into small learning communities. For this reason, the structure and content of this chapter are different from those of Chapter III. Although we discuss the school and classroom attributes within these high schools to some degree, we focus our discussion of schools undergoing conversion on the change process during the initial planning stages. Specifically, we ask: What is it that teachers, students, and school leaders are doing and considering as they move into and through the conversion process? In addition, in Exhibits IV-1 and IV-2, we provide detailed descriptions of Sullivan and Community to illustrate the change process as it has been undertaken by two schools that have converted or are beginning to convert their schools.

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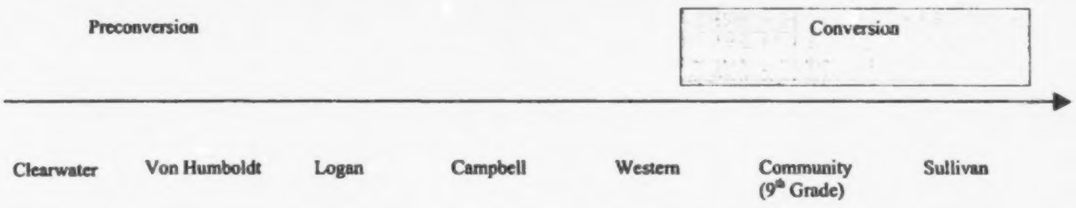
[4] Pseudonyms are used throughout the report for all the high schools undergoing conversion.

THE SCHOOLS

Spread across five states, the schools undergoing conversion ranged in size from 900 students at Sullivan to 2,012 students at Campbell. Six of the schools in the sample are located in urban areas and serve linguistically and culturally diverse populations. The seventh school, Von Humboldt, serves a primarily white, English-speaking, heterogeneous, suburban community. The level of diversity among the remaining six schools varies. For example, the student population at Campbell is 47% Southeast Asian (generally Hmong), 34% white, and 10% Somali; more than a third of its students speak a first language other than English. In the remaining schools, the student population is composed primarily of white, Hispanic, and African-American students, in varying percentages. With the exception of Logan, all these schools draw students primarily from surrounding neighborhoods. As a result, to one degree or another, these schools reflect the cultural composition of the neighborhoods within which they are located. As they convert, however, some intend to enroll students from a larger geographic area, with the potential for significant changes in the composition of their students and families. Table IV-1 provides some basic descriptive and demographic data for each of these schools. (More detailed data are shown in Tables A-4, A-7, and A-10 in Appendix A.)

School Types

Early in the process of gathering data for this evaluation, we spoke of these large schools as members of two separate and distinct categories: conversions or preconversions. Soon we found that two categories were not sufficient. It has become apparent that school conversion is an extended process without hard and fast boundaries between a "pre" and a "post" state. We have begun to categorize schools based on where they were along a conversion continuum, in terms of their planning stage or whether they were partially or fully converted:



As the continuum above illustrates, five of the schools in our site visit sample were classified as preconversion, one as a partial conversion, and one as a full conversion. Four of the five preconversion schools—Von Humboldt, Campbell, Logan, Western—were in the year immediately preceding conversion when we visited them in the spring of 2002; the fifth, Clearwater, planned to take an extra year for planning before converting in the fall of 2004. Community, a partial conversion, had already formed its 9th-grade "house" and was planning to complete its conversion by the fall of 2003. Sullivan had fully converted its school into three academies.

Table IV-1

Characteristics of Schools Undergoing Conversion

School Characteristics				Teacher Characteristics			Student Characteristics			
School Name	***Community Type***	***School Authority***	***Target Grade Levels***	***Number of Teachers***	***Average Years Teaching***	***Percent Certified***	***Number of Students***	***Percent Nonwhite***	***Percent Eligible for Free/ Reduced-Price Lunch***	***Percent English Language Learners***
Campbell	Urban	Public	9-12	106	13.8	92	2,156	66	66	38
Clearwater	Urban	Public	9-12	75	15.7	89	1,129	65	80	2
Community	Urban	Public	9-12	80	Not avail.	Not avail.	1,766	>99	35	32
Logan	Urban	Public	9-12	84	15.1	96	1,415	51	49	12
Sullivan	Urban	Public	9-12	65	Not avail.	Not avail.	1,018	Not avail.	Not avail.	Not avail.
Academy 1				25						
Academy 2				21						
Academy 3				19						
Von Humboldt	Suburban	Public	9-12	79	15.5	78	1,247	2	4	<1
Western	Urban	Public w/choice magnet	9-12	77	11.4	68	1,131	49	51	9

Source: School demographic survey, principal survey, and site visit data collections

Staff at several schools made the point that the first year of conversion is in reality also a planning year—a year for working out significant components of their model, such as curriculum and assessment rubrics. In addition, the principal at Logan told us that it would be 2006 before his school would be completely converted, meaning that only then would teaching and learning have changed significantly. As the lines between planning and conversion began to blur, we realized more fully that conversion is a process as well as an end product.

Each of the large schools discussed in this chapter has accomplished some components of the change process and is planning to accomplish still others. Taken as a group, they provide us with some early but important lessons from the field.

THE ATTRIBUTES OF EFFECTIVE SCHOOLS AND CLASSROOMS

This section of Chapter IV describes what was learned about normative climate, classroom attributes, and teacher community in the seven large schools. (See Chapter III for definitions of these concepts and their role in school reform.) Because what the evaluators saw at the schools that had already converted in whole or in part (Sullivan and Community) was unique to each of those schools. Some of the information regarding each of those schools is presented separately. (See Exhibit IV-1 for a discussion of Community and Exhibit IV-2 for a discussion of Sullivan.) The five preconversion schools, similar to one another in many respects, are discussed together throughout this section. In addition to the separate presentations on Sullivan and Community, reference to those schools throughout the section help contrast and compare the schools that have divided into smaller units already with the schools that are in the planning stages.

Normative Climate

Chapter III described the closeness of student-teacher relationships in the start-up schools, as well as the progress made toward the development of an atmosphere that supports greater student responsibility and high expectations for all students. In this section of Chapter IV, we describe what the evaluation team learned about the plans for and implementation of these attributes in the large high schools. Perhaps most important, we learned that the development of a learning environment that contributes to higher achievement for students is as important for adults and students in these large schools as it was for their colleagues in the start-ups. These seven large schools are all still in the early stages of change. Still, from Community and Sullivan, in particular, we got some hints of what may come.

Personalization

Teachers in the preconversion schools said they did not know most of their students well.

In each of the five preconversion schools we visited, students told us that their school environment supported the development of some personal relationships between adults and students. For example, the students who participated in focus groups conducted at Clearwater, Von Humboldt, and Western agreed that each of them has at least one adult in the school with whom they felt comfortable talking about problems or concerns. (A student at Clearwater even said she had a "backup" adult.) All but one of the students at Logan concurred, while only some of the students at Campbell agreed.

With some individual exceptions in each school, teachers in the preconversion schools said they did not know most of their students well. For example, teachers at Clearwater spoke of the difficulty in getting to know up to 160 students at a time; teachers at Von Humboldt agreed, saying that 125 students were also too many. At Campbell, some 2,000 students cycle through classes each semester, thus requiring that teachers come to know different students every few months. Data gathered via the principal surveys validated these teacher responses. Principals of all the preconversion schools agreed or strongly agreed with the following statement: "The size of this school makes it hard for staff and students to work closely together."

Adults and students in the five preconversion schools also concurred that, in each school, there were some students who received more personalized attention than did others. In every school visited, the evaluation team was told that students who were in advanced courses or programs were better known and got more attention than did students who were not in those courses. Students and staff also reported that some students received personalized attention from student counseling, from after-school tutoring, or from extra effort on the part of individual teachers. In addition, teachers at Von Humboldt, Campbell, Logan, and Clearwater spoke of the relationships they developed with students through extracurricular activities, such as sports, student government, yearbook, and theater. The relationships formed through these activities were cited by both teachers and students in these schools as the source of important and very personal assistance for students.

However, although all teachers spoke of personal relationships developed with at least some students, with a few individual exceptions, these relationships were not converted to personalized learning for students. For example, when asked by the evaluation team if teachers at their school planned formally for individual students, teachers generally agreed that, while formal planning was done for students with diagnosed disabilities, such planning happened infrequently for other students. This was confirmed by the five principals who responded to a survey question about the existence of individual learning plans for all students. None of them said that this practice was currently used in their schools.

Each of the seven schools planning to or in the process of converting had some form of ability grouping in core courses or offered programs for high achievers. Four schools offered Advanced Placement courses. Clearwater had honors courses, and Logan and Campbell had an International Baccalaureate program. At least two of these schools planned to retain these programs once the school was converted into smaller academies.

Some of these schools also offered courses or programs for students who were less advanced. At Clearwater, for example, students who were unable to continue in the regular high school program could enroll in an on-site General Educational Development (GED) program, thus providing them with an alternative path to graduation. This school further supported these students by offering them the services of an on-site day care program.

For several reasons, Western was unique among these five schools. First, a magnet school serving approximately 300 students has operated within the larger school for more than 15 years. Second, freshmen were grouped into 3 teams of 120 students. Both adults and students in these units experienced a far more personal environment than did the other students at Western. Lessons learned from the magnet, which serves as a school-within-a-school, and the freshmen teams were being discussed as conversion plans moved forward.

Respect and Responsibility

Preconversion schools were working toward creating an orderly climate.

Although the preconversion schools had not yet systematically put in place the structures and policies required to support high expectations for students through a more personalized approach to learning, five of the seven schools were actively working on developing an atmosphere of respect and responsibility. Western's school leader spoke of that school's observation of "the tone of decency principle." In a similar vein, Clearwater instituted a "respect law" based on the premise that respect is not given, it is earned, and everybody deserves it. During their time at Clearwater, the evaluation team heard frequent references to this law made by both students and adults. Another school had instituted a schoolwide behavior management plan, although site visitors reported that the plan was inconsistently applied.

Adults in three of the schools cited progress made toward developing a more orderly environment, as evidenced by better attendance, more on-time arrival at class, and studious behavior on the part of students. The school leader at Community said that the beginning of the year there "was like a zoo, and some students didn't even have class schedules because they hadn't even officially enrolled." By the time the evaluators arrived, GPA for the students in the converted portion of the school had "gone up significantly," and attendance was up 17% from the previous 9th-grade class. What made the difference? The school leader said he established a new policy that required teachers to stand at their doors during the passing periods to greet students and encourage them to get to class on time. Students who remained in the hallways were sent to the office, where administrators "did case management" to determine what issues the students were facing that kept them from getting to class on time. Once they were able to identify the issues, administrators developed interventions targeted toward the causes of the tardiness.

According to school leaders at Clearwater and Sullivan, both their schools were experiencing improved student attendance and fewer students in hallways during classes. A student at Sullivan commented on the same trends, saying, "Students are more mature in the hallways. They aren't playing around any more." Another student added that some kids now took their work more seriously.

High Expectations

Expectations were high in these schools for some but not all of their students.

Site visitors found little evidence that high expectations were regarded as a goal for *all* students in the preconversion schools. When teachers described lower expectations for some students, their explanations generally fell into one of the following categories:

- *Not all families provide sufficient support for students to do well.* One teacher described her concern in this way: "I don't think [the school] fails them. I think their families fail them and they choose to fail. The problem starts when you get up in the morning." A teacher at another school agreed, saying that some families don't focus as much on learning.

- *Not all students are capable of reaching high expectations.* According to one teacher, "They're not interested in going to college for the most part. If you asked them if they wanted to go, they'd say 'yes', but they can't get in or handle it."

- *Students from certain ethnic groups do better than others.* One teacher described this attitude as "one of the worst kinds of racism—allowing students of whatever color to slide by, to not have equally high standards for everyone."
- *Some students don't want to do well.* "About 50% of the kids don't want to learn."

Another reason commonly given for student lack of achievement was the fact that some students arrive without the skills needed to do well in high school. Concern about this issue has prompted several schools to develop strategies for improving the skills of 9th graders. At Clearwater, incoming freshmen's literacy skills are assessed before the beginning of the school year, and students are grouped in first-semester English classes by ability. In addition, teachers throughout the school have students write on a daily basis. Freshmen at Western are grouped into teams.

It is encouraging to note, however, that 9th-grade students in the two schools that had converted felt their teachers did have high expectations for them.

Powerful Teaching and Learning

Instructional Practices

At the time the evaluators visited these schools, the five preconversion schools were still in the early stages of their planning and design process. As a result, planning for curriculum, instruction, assessment, and, in some cases, how teachers, students, and the school day would be organized was in a state of flux. With a few exceptions, the organizational structures in these schools are still fairly traditional. For example, teachers tended to be organized into subject matter disciplines (e.g., math department, science department), and the typical class period tends to be 45 minutes, as compared with the extended blocks that exist in most of the start-up schools.

Classroom activities in these large high schools were fairly conventional.

In just over 60% of the classroom activities we observed, students in these classes listened to lectures and presentations, responded to known-answer questions (questions for which teachers know the right answer and most of the wrong answers), copied material, took notes, reviewed completed assignments, and read textbooks. Below is an example that is representative of these observations:

> The activity in this 9th-grade English class was a grammar review, specifically a review of the rules used to convert singular nouns into plurals. The teacher began the activity by asking someone to give him an example of a compound word. When one student said, "mother-in-law" the teacher asked him how to pluralize it. At that point, the teacher began calling out a series of questions: Words ending in O? Words ending in Y? Words ending in F or FE? Individual students would answer these short, known-answer questions. By the end of the exercise, each student had answered at least one question.

Students were more active participants in just over a quarter of the activities we observed in these schools. In these cases, the teaching strategies used led to slightly more involvement and more active learning, with students discussing previously taught concepts and developing and practicing computations, procedures, and skills.

Active inquiry and in-depth learning were more evident for the remaining 13% of the classroom activities we observed. In these cases, students talked about their ideas and work, engaged in problem solving, collected information and data, and analyzed and interpreted information.

On our teacher surveys, smaller percentages of the preconversion teachers than of the start-up teachers reported assigning multidisciplinary projects to their students, emphasizing real-life applications of instructional content, or appealing to student interests.

Performance Assessment

Only a small minority of teachers in these schools regularly used either performance-based assessments or rubrics to measure student progress or to guide their own teaching. In most cases, teachers used multiple-choice and other traditional tests as the primary means of assessment, although project work did contribute to grades in a small number of cases. Senior portfolios were required in at least two of the schools visited (Clearwater, Sullivan), and "rite-of-passage" portfolios were required at Sullivan (the converted school) for promotion from the 10th to the 11th grade.

Technology as a Tool

For the most part, access to hardware, software, and Internet connections did not seem to be a major issue for teachers and students in the large schools we studied. In most of these schools, teachers and students had adequate access to technology, although there was little evidence that technology had been integrated into the curriculum. In school surveys, only three principals of schools undergoing conversion reported a major emphasis on technology integration with classroom instruction in their schools. When technology was used, it appeared to be used mainly for teaching and reinforcing basic skills. Survey data show that in the preconversion schools, at least 25% of the teachers reported using technology in this way. There was little evidence that teachers and students used technology to support instruction in core courses at these schools, and no evidence that teachers created assignments and projects that required students to use technology in any systematic way to conduct research or analyze data. In at least one school, technology-infused courses were designed to develop proficiencies in the technology itself. There, students are offered a host of computer-related courses, including courses on computer-aided drafting/design, graphics, communications, and electronics.

Teacher Professional Community and Distributed Leadership

In each of the seven large schools visited, evaluation team members found communities of teachers working together. However, differences between the preconversion schools and the conversions were noted regarding both the function and prevalence of these communities.

Professional Community

In these large high schools, teachers felt a sense of community with a subset of other staff rather than with the staff as a whole.

In the five preconversion schools, elements of teacher professional community tended to occur at the department or grade level or for teachers of the same course content. Teachers at four of the schools reported that they talked regularly with other department members. In general, these meetings were used to discuss curriculum and other content-related issues.

Although teachers and school leaders at these schools noted that professional learning opportunities were available, either through the grantee or from other sources, one or more teachers in four of the schools reported that either they did not have sufficient time to attend these professional development activities or the topics provided did not meet their needs.

In at least two schools, such professional development opportunities were supplemented by mentoring programs and opportunities to observe other teachers. However, according to one teacher, the formal mentoring program was not particularly effective. As a result, she sought out her own mentor:

> We do have a mentor program, but it's pretty much on paper. . . I was paired with a woman with the most experience in my department, and it didn't really fit with what I needed, so I sought people out on my own. My friend had the same mentor, so I've unofficially helped him get more creative with his lesson plans.

Teachers from the smaller learning communities at Sullivan and within Community's 9th-grade house described teacher communities that served a different function. At Community, the creation of 9th-grade teaching teams had fostered regular communication among teachers. Meetings were held twice a week to discuss student interventions, cross-curricular planning, student tours, and other team issues. In addition to these formal meetings, teachers also reported daily communication with their colleagues about students. According to one teacher, these daily conversations let her know in advance which students were having a hard day; she could then adapt her interactions with those students. Teachers described their group as a "great team" and very "supportive." However, a 9th-grade teacher noted that the professional culture that had been established in the 9th-grade teams did not exist for the staff as a whole.

Sullivan created three learning communities simultaneously, a process described as difficult by school leaders and teachers. Although members of these small communities met together, the school leader said that, since the conversion, the entire school faculty had come together only once. Teachers found this separation difficult. One said, "they split us up." Another, after commenting that adults at Sullivan were closer as a staff last year, said that "people have now been eating in their rooms."

Survey data from the preconversions indicate that 38% of teachers had coached or mentored teachers in their schools five or more times since the beginning of the school year, and just over 25% reported receiving coaching or mentoring in the same time period. Fewer teachers reported participation in classroom observations: one in five reported observing other teachers, and 18% reported being observed five or more times since the beginning of the school year. (Survey response rates at Sullivan, the converted school, were too low to include in the analysis.)

Distributed Leadership

Their sense of professional community was often influenced by the extent to which teachers participated in school governance.

School leaders and teachers at Sullivan, Campbell, Clearwater, and Von Humboldt reported that their schools had collaborative decision-making processes involving various stakeholders. The structures for participation varied. In some schools, teachers had roles on committees involved in restructuring the school. In other schools, lead teachers who ran small learning communities worked with a school leader who oversaw the whole school. In still other schools, teachers were involved in school governance through membership on a site-based management team that made decisions for the school. Students might also participate in the shared decision-making processes.

The role of school leader in the decision making process also varied. The principal at Von Humboldt described his role this way: "My role is to facilitate the process of ownership, not lead it—specifically to ask, 'What do you need me to do for you to help you be successful?'" At this school, teachers who had ideas for a small learning community were asked to create a plan. If the plan was deemed viable, the teacher was chosen to be lead teacher for that small school.

In describing Sullivan, a fully converted school, the school leader there reported a different governance structure: "There are committees based on a list of things that need to be done." Members of these committees talked and developed proposals and then took those decisions to the Collaborative Decision Making (CDM) team. A teacher at this school noted the principal's leadership style as having a positive effect on the staff: "The principal has been key. He includes us in everything and gets our opinions."

Still, survey data suggest that, from the perspective of most teachers, shared leadership (i.e., a structure where school members are full partners in school governance) did not yet exist at either the conversions or at the preconversions. Many of the teachers in these schools who responded to the survey reported having little or no influence over the decisions made at their schools. More than three-quarters of the teachers who responded reported having little or no influence over days and time of day for instruction (86%), establishing or improving school- or gradewide assessments (83%), or choosing school programs or reforms (80%). Similarly, more than half of the teachers felt they had no or little influence over selecting the content of professional development activities (70%), student discipline procedures (66%), or establishing or improving the curriculum (56%).

THE CONVERSION PROCESS

This section of Chapter IV describes the process these seven schools went through or were going through as they converted. It includes a discussion of the following:

- The decision and motivation to convert
- The preparation for conversion
- The design of the new school.

The Decision and Motivation to Convert

School staff were not integral to the decision to convert these schools into smaller units.

For at least six of these seven schools, the decision to convert did not come from our respondents (e.g., teachers, students, principals) and may not have come from the community within which they reside. Adults at three schools said the decision to convert was made by their district superintendent. School leaders in two other schools "suspected" it was the district that made the decision. Staff at one school said that, for them, the decision to convert grew out of a settlement between the public schools and the teachers' union that was arranged by their state's governor. Staff and school leaders at the remaining school said that although they were not sure who was responsible for the initial decision to convert, they supported the decision.

The fact that a "top-down" decision to convert was made raises a question about how motivated adults in these schools may be to do everything that is necessary to make a conversion work well. As the evaluators learned, the issue of staff buy-in is indeed real in these schools. (See the "Conversion School Challenges" section later in this chapter.)

Nevertheless, there are indications that school leaders and some teachers in these schools were interested in and willing to change. For example, school leaders and teachers at Clearwater, Sullivan, Western, Community, and Campbell described their involvement in other recent reform efforts, adding that part of the impetus behind those previous efforts was a recognition that change was needed in order to improve student academic performance. As one teacher said:

> We were looking at who we are, and we didn't like what we saw. With attendance problems and our low test scores, we decided we'd do something drastic to make a change.

Perhaps the same factors that served to motivate school staff during previous reforms will help them as they move through the conversion process. However, as will be discussed later in this section, a school's history with reform efforts did not always forecast enthusiasm for subsequent reforms.

The Preparation for Conversion

Preparation for school conversion is a long, drawn-out process.

Once the decision to convert was made, a majority of the schools began a two-year planning process (Sullivan, Clearwater, Highland, Western, Community). During the first planning year, schools took a number of steps to get ready. Most commonly, these included the following:

- Conversations with the grantee that were, in most cases, brokered by the district.
- The formation of a planning committee, most commonly called a design team.
- The formation of at least one, and in most cases more than one, other committees (e.g., transition teams, small school learning committees, core content committees).
- Visits by members of the planning committee to small schools that were already in operation.

Additional planning strategies used by smaller numbers of schools included staff retreats, the hiring of consultants and new staff, attendance at conferences, and meetings held with parents and community members.

By the second planning year, staff at these schools had begun to put more of the specific pieces in place. Common tasks included: final decisions about the type and number of academies, teacher selection or assignment to small schools, initial work on curricula, development of advisories, and some attention given to teacher and student buy-in.

It is important to note that, throughout the first and second year of planning, only some teachers at each of these schools were actively involved in the planning process. For the most part, teachers who were actively involved in making decisions about the conversion spoke more positively about the planned conversion. School leaders and teachers in four of these schools (Von Humboldt, Campbell, Logan, Community's 10th-12th grades) said that in-depth work on development or modification of curricula would not happen until 2002-03, the first year of conversion. In effect, these schools were creating a third planning year for at least some of the substantive conversion processes.

The Design of the New School

The design plans for each of the seven schools call for the reformation of these large schools into thematic academies. As Table IV-2 illustrates, the number of academies to be created by the schools differs, as do both the timeline for the conversion and the type of academies to be formed.

Table IV-2
School Conversion Schedules

School	Number of Schools	Conversion Year
Campbell	6	2002-03
Clearwater	4	2003-04
Community	9th grade	2001-02
	10th grade	2002-03
	11th-12th grades	2003-04
Logan	6	2002-03
Sullivan	3	2001-02
Von Humboldt	5	2002-03
Western	3	2002-03

Community and Western intend to break up into three academies, while Clearwater will create four small schools and Von Humboldt five; Campbell and Logan's conversions will result in six academies at each school. Of these seven schools, only Community has chosen to complete its conversion in stages.

The type of academies selected by these schools varies. For example, Von Humboldt plans to create five autonomous academies, each with a different academic focus. Clearwater's large building will be subdivided into four academies, with each academy to be located in a separate wing of the existing building. Each academy will have a different topical focus: professional and technology, business and marketing, arts and humanities, and health and human services. According to the principal, each academy will have a team of five teachers who will collaborate toward an integrated curriculum. Although the basic requirements for students will be the same across academies, the teaching team in each academy will be expected to make those requirements relevant to the mission of that particular academy.

Although most of these schools have chosen to convert the entire school at a single point in time, early lessons from Community indicate that there may be some value to staged conversions. One advantage, according to the principal, is that the partial conversion helped them to identify a "design flaw" early in the process. During the implementation of the 9th-grade house, they discovered that students were not allowed to take elective courses, which proved problematic for students who were more advanced or who wanted to take courses in foreign languages. They worried that some students who wanted more advanced courses might decide to leave their school. Once they were aware of the problem, they asked the grantee they were working with to help them modify their conversion model to one that includes elective courses.

Western, formally classified as one of the five preconversion schools, also had some experience with small schools and has been able to reflect on those experiences. In this case, the school has operated a small magnet as a school within the larger school since 1986. As they prepare for total school conversion, they are reflecting back on lessons learned from the operation of that unit and using the results of that reflection to guide the development of their next small schools.

CONVERSION SCHOOL CHALLENGES

Regardless of whether a school had already converted or was still thinking about how to convert at the time the evaluation team visited it, principals, teachers, and students in each school described some similar barriers to the change process. This section of the report briefly addresses four of those challenges that were most commonly discussed:

- Facilities
- Time
- Teacher buy-in
- Grantee support.

Facilities

High school buildings require significant revamping to make them conducive to small, self-contained learning communities.

Concerns about facilities, a component of material capital, were mentioned by five of the schools: Sullivan, Von Humboldt, Campbell, Logan, and Western. Leaders in these schools said that space in their buildings was not sufficient to ensure that each of the small schools to be formed would be able to function autonomously. As a result, said staff at several schools, they would be converting to "small learning communities" rather than to small schools.

Whereas school leaders typically discussed concerns about computer labs they could create and what to do about shared versus individual lunch rooms, teachers had different concerns. Teachers at three schools worried about how the conversion might affect their classrooms. They worried, for example, that they might now have to share rooms and teaching materials.

However, the need to share space was not necessarily described in negative terms, as the following quotation from one teacher at Western illustrates: "I don't want to see [our] high school divided up. I agree with the advantages of small educational settings, but I think students here need to be part of the whole."

Two school leaders added that, unfortunately, converting their large schools into more than one unit did not affect their funding base. For example, how would they get money to create three or four computer labs? In the opinion of several of the schools' leaders, autonomous small schools cannot be created without sufficient funds to redesign the school facility.

Time

The tasks to be addressed by these large schools as they convert appear no less daunting or time-consuming than those faced by the start-ups. True, start-ups often are confronted with tasks that may be unique to them, such as setting up payroll systems or obtaining a charter. However, in these large converting schools, not only must principals continue to handle all the day-to-day activities connected with administering a large school, they also must now form committees that deal with new school design, coordinate with a new stakeholder—the grantee through which their foundation funds are administered—and visit other small schools to get ideas for curriculum and assessment, while still redesigning their current curriculum and assessment systems to meet state and district demands. Teachers must continue to teach, prepare lessons, and become adept at new curricula and assessment systems—all while trying to meet the needs of up to 150 students. One teacher at Community said that she used to feel more on top of what she was doing, but now, "I don't have any time for a personal life."

As we studied these schools, we became increasingly aware of the burden put on staff in these large converting schools. Many of them now had two jobs. One result of these mounting burdens is teacher burnout. One or more teachers at both of the schools that had completed part of the conversion process reported feeling drained or worn down or having no time for a personal life, since "all small schools require intense effort for each teacher." One teacher summed up the feelings she had about the time spent creating plans for change in the 9th grade in this way: "I think a lot of this year has really torn me down and torn down some of my desire."

Teacher Buy-in

Teacher buy-in for conversion to smaller units was a concern in all of these schools.

The issue of teacher buy-in was discussed by at least several teachers and school leaders in every school we visited. The concern was common across schools, although the reasons cited for raising this as a concern varied. For one teacher, the reluctance to go forward with this change process was rooted in past experience with unsuccessful reforms:

> There have been many changes in the district, so now teachers are cynical about whether any of them, including this one, will last. You know, nothing has lasted before. Why should we put the effort into it? I've been in the system so long that I've seen the pendulum [swing] so many times that, quite frankly, I view this not as a change, but just as one more swing of the pendulum.

This opinion was seconded by the principal, who described his staff as "incredulous that this was really going to happen."

For other teachers, it was the top-down nature of the reform that was problematic. As one teacher said, even if some teachers do agree with the decision to convert, there is still resentment from "a lot of older staff that this isn't something they voted for."

Still others spoke of a concern that changes connected with the conversion might negatively affect their practice in very personal ways. For example, these teachers worried that they would have to share classrooms. After acknowledging that this concern existed, a teacher said:

> I think some of the turf building had come as a result of. . .people wanting to protect their area of expertise. [Teachers believe] 'This is what I've created, so this is who I am, and if this is taken away, then you won't know who I am'.

Some adults at the conversion and preconversion schools talked about the stress that the process of change puts on school faculty. Teachers and most school leaders at these schools indicated that various levels of frustration, confusion, and fractionalization existed for some teachers at their schools.

Some teachers and leaders expressed confusion over their roles in the new school structure and how the changes would affect their work. One teacher reflected on the uncertainty of how teachers would be divided across the academies, how well the teachers would be able to interact, and whether the departmental relationships would suffer. Similarly, teachers at two schools expressed concern about how the work required for conversion and the resulting frustrations could create "tremendous pressures."

Grantee Support

Some schools characterized their grantee's assistance as limited.

Among the survey questions asked of the principals of the seven large schools were several related to the kind of support they felt they got from their grantees. While the majority of principals in all the schools felt their grantees had been at least "somewhat helpful" in leveraging or soliciting resources, gaining more autonomy for the school, and enhancing relations with community and business leaders, few thought that grantees had helped them to a "great extent." This information was confirmed through interviews with four school leaders who acknowledged that their relationships with their grantees were not very close.

FACILITATORS

The 2002 site visits left the evaluation team with the clear understanding that conversion is a difficult process and one that challenges principals, teachers, and students in these schools. This fact makes it important to identify processes and people to provide support during this change process. This section of the report briefly discusses two of those supports:

- The foundation, the grantees, and the district.
- Teachers, parents, and students who support the change.

The foundation, the grantees, and the district are providing funding and support.

Adults in all seven schools credited outside help for progress already made, as well as for that still to come. School leaders in each of the seven schools spoke of financial resources obtained from the foundation. One school leader described the effect of foundation funds in this way:

> The money has opened huge doors. It's brought us the things to move this forward. [It gives us a] chance to treat teachers as professionals—for example, sending them to professional development and paying for their hotels and transportation.

Credit was also given to the various grantees. Adults at Community were grateful for help received with curricular and instructional adaptation, while Von Humboldt, Campbell, Logan, and Western appreciated the help their grantees provided with professional development. All seven mentioned the grantees' help in the early planning phase, when school staff and community representatives were visiting other schools and holding meetings to begin redesigning their schools. Others, like the school leader at Clearwater, credited staff at the district office and local businesses for support provided.

Information gathered from these interviews was confirmed by the survey data. As noted above, the majority of principals in all the schools felt their grantees had been at least "somewhat helpful" in leveraging or soliciting resources, gaining more autonomy for the school, and enhancing relations with community and business leaders. The most common areas for which principals reported that their grantees had helped them to a "great extent" were leveraging or soliciting resources and developing relationships with other principals and administrative leaders. Gaining more autonomy and establishing relations with technical assistance providers were also areas in which some principals felt their grantees had helped to a great extent.

Some teachers, parents, and students support the change.

As described earlier in this chapter, the lack of teacher buy-in was making change difficult in some of these schools. Still, in each school there were those who supported the formation of small schools, who said they looked forward to changes in teaching and learning as schools continued to convert. As one example of these, the evaluation team noted that at least some teachers in five of the schools we visited said they looked forward to promoting active inquiry and in-depth learning in the next stages of their work. These teachers said they hoped to make learning more meaningful for students, and students said they wanted opportunities to pursue their interests.

If not all are yet on board, one school leader said, support sometimes grows over time:

> Parents and the community are now at 75% buy-in. Teachers were at about 75% approval the first time they were told about the change. Now they are at about 98% buy-in.

Buy-in was also evident from students at Community, the school that had only partially converted. There, separate focus groups allowed evaluators to compare opinions of students from the converted portion of the school with those of students from the nonconverted part. Compared with the school's 11th graders, younger students in the converted part of the school felt that they received more personal attention and that their teachers held higher expectations for their progress.

EARLY LESSONS

Site visits to these seven schools provided the evaluators with some very early information about the process of conversion. We learned that planning, preconversion, and conversion are not discrete phases; converting a large school is a continuous process, and schools appear to spend most of their time on the changes that are most immediate. Because full-time teachers and principals have limited time beyond what they already devote to current students, they must focus their efforts on particular aspects of the conversion.

The evaluators also learned that each of these large schools faces significant barriers or challenges. Among those that are most common across the schools are facilities that themselves function as barriers to the creation of autonomous learning environments; staff who have experienced too many promises made by previous reform efforts or who are experiencing burnout; and teachers who have low expectations for students—in some cases, because students come to them unprepared to do high school work.

There were also early harbingers of more complex changes still to come. Schools had begun to put in place some early indicators of positive normative climate—for example, by tackling some issues of respect and responsibility, including a focus on order. The design process was under way, and in every school we found at least some staff and students who were ready for and looking forward to the change. In addition, many schools already had at least some components of shared leadership and teacher professional communities in place.

Exhibit IV-1
Gradual Change at Community High School

Community is a neighborhood school serving approximately 1,700 students. In the past—the 1950s and 1960s—Community had a grand athletic and academic tradition that included a world-renowned choir. Things have changed, and one indicator of that change is the fact that the neighborhood suffers from extremely high levels of violence. As a result, said the principal, most students know someone or are related to someone who has been killed, and many students come to school with posttraumatic stress. Aware of both past traditions and current stressors, school administrators, staff, and community members are trying to resurrect the past academic success by modifying instructional structures so that students receive more personalized, individual instruction. They hope to accomplish this while also maintaining the large, comprehensive school size that allows for the development of large, successful athletic, music, and other extracurricular programs.

Impetus for Change. In 2001, a series of events took place that led to greater staff willingness to participate in a reform project such as this one. First, as a result of the school's poor academic performance ranking by the state—a ranking that was based on several factors, including SAT-9 test scores—several community-based organizations came together to call for reform. Second, a group of the teachers attended a conference where they met one of Community's former principals and learned that, since leaving Community, that principal had implemented a small-school initiative in another urban high school. The former principal was then invited to Community to help begin discussions around reform.

The Design. Community decided to conduct a 3-year phased rollout plan. During Phase I, the 2001-02 year, the 9th-grade house was created. Phase II, to be the implemented in the fall of 2002, was to add a 10th-grade house to the conversion. During Phase III, an upper-division house will be formed of both the 11th and 12th grades.

The school design teams responsible for developing and implementing the 9th-grade house structure decided that the curriculum for 9th grade would not include the option for electives, that instruction would be conducted in 90-minute blocks, that students would have the same lunch period, and that students would take the majority of their classes in one building. The design team also recommended that 9th graders be organized into groups of 60 and that teams of four teachers (math, English, science, and social studies) be assigned to each group of students. Teaching teams now meet before school every week to discuss how their students are doing, what students still need, and how to get them what they need. In addition, the plans call for 9th and 10th graders to stay with their same team and same teachers.

By the 10th grade, students will declare a "major." The small learning communities will be developed around these majors, and students will be in the same small learning community for the 11th- and 12th-grade years.

The design teams continue work on the development of the 10th-grade house for the 2002-03 school year, as well as on the upper-division houses for the following year. The work of these teams has been guided and supported by the grantee.

Early Progress. Joint conference periods among members of teaching teams encourage discussion of student needs across classes. Teachers on these teams spoke positively of the increased contact this arrangement allows them to have with their students. In the case of one of these 9th-grade teachers, smaller classes with fewer students made it possible for her to visit her students' homes and create 4-year action plans with the students and their families. These plans are important, she said, because they help parents understand how to support their children's academic efforts. Another 9th-grade teacher concurred, adding that he is now able to provide more individualized instruction.

A focus group conducted with 9th graders revealed that students liked being in the 9th-grade house. They spoke of personalized attention from teachers and about teachers who care about them and their academic progress. In the opinion of these students, they have better teachers than do 10th-12th-grade students; they feel they know these teachers better, and find it easier to learn from them because of the smaller classes.

Exhibit IV-1 (Continued)
Gradual Change at Community High School

In contrast, 11th-grade students, who participated in a second focus group, spoke less positively about their teachers and their school. They also worried that expectations of them might not have been high enough to prepare them for college (although this concern might also be attributed to the age of these students, which makes college a more immediate concern). Still, several members of this group said there was at least one teacher with whom they could relate well.

Plans for Year 2. In addition to the midyear adaptations described above, Community plans to make these adaptations to its design:

- Change curriculum and instruction to take advantage of the smaller student load.
- Design electives for the 9th grade house.
- Attempt to address the teacher shortage.
- Develop long-term projects.

Exhibit IV-2
All-at-One-Time Change at Sullivan

Sullivan is an old school that opened more than 100 years ago as a neighborhood, vocational school, although it has been in the present building for only half that time. Court-ordered busing changed the composition of the student body until only 25% of the students came from the neighborhood, with the rest drawn from more affluent areas of the city. When busing ended, Sullivan became a choice school but, according to a school leader, "could not hold the white students" and so reverted to functioning as a neighborhood school. Today, most of its 900 students live within the immediate neighborhood.

It is a neighborhood that shows early signs of gentrification, with newly renovated houses located only a few blocks from dilapidated housing. Most of the students come from the older sections; 80% of them are eligible for free or reduced-price lunches. Test scores for Sullivan students are described as low, and school leaders say a district study showed that students with higher test scores choose to go to other schools.

History of Reform. As proved true for the other large schools in our sample, Sullivan and its faculty have been involved in various reform efforts prior to the small-schools project. Reform efforts in the 4 years immediately preceding the 2001 conversion included involvement with the Coalition of Essential Schools and the National School Reform Faculty. During that time, the school was divided into lower and upper houses. Planning periods for teachers, peer observations, student work analysis, and critical-friends groups were implemented. When student achievement and test scores did not improve, the staff "knew they would have to do something different" and decided to seek support for converting into small schools. Still, say school reform leaders, those 4 years of reform laid an important foundation for the present changes.

The Design. Sullivan's conversion design called for three thematic, self-contained academies of approximately 400 students each. However, staff reported that, because the conversion happened more quickly than originally anticipated, there was not enough time or money to finish making the necessary changes (e.g., putting science labs on every floor). As a result, all three small schools currently share athletic facilities, music facilities, the auditorium, the library, the lunchroom, and the computer lab, making it difficult to create a small-school feeling. Plans for the 2002-03 school year called for science labs on every floor, a move that will bring these three academies closer to being self-contained.

Goals these small schools have set for themselves include a 25% improvement in student performance on standardized tests over 3 years, success for all students, 85% or greater attendance, more enrollment in accelerated or AP courses, fewer suspensions, and more engagement among students and adults.

Each small school has its own school leader and its own site-based management team with representation from all stakeholders, including the business and parent communities. In addition, each school has a Collective Decision Making (CDM) team to handle budgetary, personnel, and curricular decisions. Individual student councils and senior committees were an adaptation made midyear, when students protested the lack of these groups. A second midyear change included the division of money into three separate budgets, something that the small-school leaders say helped them better manage their resources. In fact, say the school leaders, a major midyear adjustment was the push for the small schools to be recognized by the grantee as independent schools with separate and sufficient resource allocations. Before that point, "Sullivan was a big school being run into small pieces."

The school day at Sullivan is organized into six blocks of instructional time. Teachers are with students for five of six blocks and are assigned to teaching teams assigned by grade. Additional components of the instructional portion of the design call for teachers to function as mentors, coaches, and consultants; for independent study for seniors; and for community internships.

Early Progress. Early results indicate that more of the teachers at Sullivan are more connected to students than were teachers at the preconversion schools. According to the leader of one of these academies, both teachers and school leaders are able to spend more time with individual students. As one teacher described it, "I know all the 9th graders, and I can help and mentor them." As for the effect of this personal attention on students, one school leader said he has seen students "blossom."

Exhibit IV-2 (Continued)
All-at-One-Time Change at Sullivan

Students, however, gave the school mixed reviews. Although several said that teachers know them well, others were less sure. One of the students who likes the new arrangement spoke of the closeness of teacher-student relationships and teacher expectations for students in this way: "The teachers will call your home if you aren't here. . .It's kind of cool that they care."

Plans for Year 2. In addition to the midyear adaptations described above, Sullivan plans to make these adaptations to its design:

- State literacy funds will be used for five literacy teachers and two literacy coaches.
- More attention will be given to preparing incoming freshmen.

CHAPTER V

COMPARISON OF SMALL AND CONVERTING HIGH SCHOOLS

The preceding chapters provided narratives describing the early stages of new small schools and large high schools converting into smaller learning communities. Drawing primarily on data collected during site visits to schools, those chapters characterized various aspects of reforming schools, including their normative climate, classroom instruction, professional community and implementation activities. The purpose of this chapter is to provide explicit comparisons on these dimensions among the three types of schools we studied in 2001-02—models, start-ups, and preconversion high schools.[5] Drawing primarily on survey data collected from 21 high schools in the spring of 2002—5 models, 8 start-ups, and 8 preconversions—we address three key questions:

(1) Are there differences between the model, start-up, and preconversion high schools on the key attributes of effective schools identified by the foundation?

(2) Do these schools differ on features that are expected to promote the implementation of the attributes?

(3) Do these schools differ on key measures of student development?

Over the course of the evaluation, we plan to collect additional survey data on the start-up and converting schools discussed in this report.[6] In particular, we plan to administer surveys in the start-up schools in the spring of 2003 and 2004, when the schools are in their second and third years after opening. In 2004, we also plan to administer surveys in a matched comparison school for each start-up. We also plan to administer surveys in the converting schools again in the spring of 2004.

By collecting data in subsequent years, we will be able to examine the change in foundation-supported schools as they continue the process of implementation, and the comparison schools will help us put these changes into perspective.

Since we have completed only the first wave of data collection, the analyses presented in this report provide the baseline from which to assess the change in foundation-supported schools in upcoming years. The preconversion schools in particular were planning reforms rather than implementing them at the time of our surveys. Comparison schools have not yet been surveyed. With additional rounds of data collection, we will be able to report change in foundation-supported schools and make explicit contrasts with comparison schools.

Although reporting only one round of surveys, we have a rich set of data to use to describe the schools receiving foundation funding. We can also provide a simple point of comparison by contrasting small schools with the large high schools that are planning future conversion. Because model and start-up schools have been working on developing aspects of effective schools (e.g., personalization, common focus) stressed by the foundation, we would expect them to be significantly different from preconversions that are just in the planning phase. Failure to find differences between these two sets of schools in terms of the effective-school attributes would suggest that the foundation's theory of change is built on faulty premises. Moreover, we also provide comparisons between models and start-ups with the idea that models, earlier described as instantiations of the foundation's goals for schools, may be more likely to reflect features of effective schools than are start-ups (which were only in their first year of existence at the time of data collection). All of these hypotheses are tested in this chapter and provide insights into the current status of schools supported by the foundation.

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[5] Two of the schools discussed in Chapter IV, Sullivan and Community, were not preconversion schools; they had begun their conversion. These two conversion schools were not included in the analyses of the survey data because of their low response rates (see Table B-1, Appendix B for a list of response rates by school).

[6] See Appendix A for more details concerning the plans for future survey administrations.

DESCRIPTION OF ANALYSES

As illustrated through our narrative of site visit data in earlier chapters, there appear to be important differences among the schools we have studied, and these differences indicate that model and start-up high schools have implemented, or are in the process of implementing, many of the attributes of effective schools. These chapters also described factors that might affect the implementation of the foundation's attributes (e.g., human and material capital). Here we take a step back from the detailed descriptions and provide a summary view of these issues, using student, teacher, and principal responses to a wide range of survey items.

Several types of analyses are reported in this chapter. Differences across school types in the principal survey data and the background characteristics data were analyzed by using ANOVAs and chi-square statistics. The analyses for the attributes and outcomes based on teacher and student survey data used multilevel and multivariate models, specifically hierarchical linear models (HLM). For more details concerning the statistical analyses conducted in this chapter, see Appendix B.

Although survey items provide a powerful tool for making comparisons, there are some caveats to keep in mind while interpreting the analyses. First, these data were collected at one point in time and provide a snapshot of the school features and outcomes at that point in time. These data are cross-sectional, and we cannot make any determinations about causality. Second, one artifact of our comparisons between groups is that significant differences between preconversion schools and the small schools (i.e., start-ups and models) could be due primarily to the difference between models and preconversions. In our analyses, the average for preconversion schools is compared to the average of model and start-up schools combined. Therefore, it is possible that the model schools are driving the average of the model and start-up schools. Our models did not test for differences between the start-ups and models and preconversions separately. Third, the majority of model and start-up schools are charters, and the preconversion schools are traditionalpublic schools.[7] As charters, models and start-ups have a great deal of flexibility not available to the public preconversion schools. For example, they tend to have more autonomy in hiring staff and enrolling students. Teachers may be selected for their success with certain kinds of teaching or their commitment to the school mission. Students may be more advantaged in terms of parental involvement in school, their past success in school, or their motivation to improve their educational opportunities. Thus, any differences we find among school types may be attributed to these selectivity issues rather than the size of the school or its commitment to implementing the foundation's attributes. Finally, it is likely that there are other preexisting differences in teacher and student characteristics across the school types. We do attempt to control for these demographic differences in our analyses, but we acknowledge that these controls may not be perfect.[8]

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[7] Nine of the 13 start-up and model schools are charter schools, and all start-ups and models had an open-enrollment policy, meaning that they were not constrained to take all of their students from neighborhood feeder schools.

[8] Appendix B contains a more thorough discussion of the demographic variables and how they were used in HLM analyses.

Differences in Teacher and Student Background Variables Between School Types

Table V-1 provides simple means and standard deviations illustrating key background characteristics for teachers and students in our sample, grouped by school type. This table also presents results of chi-square tests and ANOVAs that tested for differences between school types. These data reveal some differences in the characteristics of students and teachers in model, start-up, and preconversion schools and were controlled for in the analyses presented in this chapter.

Generally speaking, there were few significant differences among teacher characteristics across school types. However, teachers in the models and start-ups were more likely than teachers in preconversion schools to be teaching multiple subjects. They were less likely to be teaching exclusively nonacademic subjects (e.g., music and physical education) than teachers in preconversion schools. This difference is not surprising, given the small size of the faculties in model and start-up schools. In addition, teachers in preconversion schools had more years of teaching experience than teachers in model and start-up schools.

There were more differences in student characteristics across school types. Specifically, start-up schools enrolled more minority students than did model or preconversion schools. Furthermore, students in model schools reported that their mothers had a higher level of education than did students in start-up and preconversion schools.

In addition, there was a difference in the grade distribution of students in the sample. Specifically, many start-up schools began by enrolling only 9th or 10th graders and had not yet expanded to include higher grades; therefore, our student sample for start-up schools generally includes higher proportions of students in the lower grades than those for the models and preconversions. Although the model and preconversion schools generally enrolled the same grades (i.e., 9-12), two of the preconversion school leaders did not allow their 12th graders to be surveyed. Therefore, our sample of students from preconversions includes a lower proportion of 12th graders than does our sample from model schools.

Although far from a comprehensive list of characteristics that may differentiate the types of students and teachers in the schools that we are examining, our analyses do suggest some important compositional differences that may explain some of the school differences that we report in this chapter and others. We have controlled for these differences to the extent possible with the data that we have, but caution the reader in the interpretation of our results. Differences in schools' implementation of the effective-schools attributes, though often very large, cannot be causally attributed to school size or school type.

Table V-1
Means and Standard Deviations of Teacher and Student Background Variables, by School Type

Variable	*Preconversion* *N=521*	*Start-up* *N=77*	*Model* *N=63*
Teacher Background			
Subject taught			
Percent reading	13	10	11
Percent mathematics	13	9	10
Percent science	12	9	13
Percent social studies	11	5	10
Percent multiple subjects	12[a]	43	41[c]
Percent nonacademic	38[a]	23	16[c]
Percent holds a national, state or probationary certification	80	71	75
Percent holds a master's degree or higher	62	60	56
Years of teaching experience	15.9[a]	7.6	6.2[c]
Variable	**Preconversion** *N=5,305*	**Start-up** *N=715*	**Model** *N=691*
Student Background			
Race/ethnicity			
Percent Asian/Pacific Islander	17[a]	11[b]	17
Percent black	22	19[b]	11[c]
Percent Hispanic	11[a]	18[b]	25[c]
Percent white	43[a]	18[b]	39
Percent other/multiracial	7	10	8
Percent non-English language spoken at home	45[a]	66[b]	58[c]
Percent female	54	57	50
Grade level			
9th Grade	34.2[a]	52.1[b]	26.4[c]
10th Grade	28.6	26.6	26.7
11th Grade	24.4[a]	12.8[b]	26.1
12th Grade	12.8[a]	8.6	20.8[c]
Mother's education			
Percent don't know	12[a]	18[b]	7[c]
Percent high school diploma or less	49[a]	45[b]	26[c]
Percent at least some college	39	37[b]	67[c]

[a] Peconversion schools are significantly different from start-up schools. These statistics are based on the following analyses. For categorical variables, chi-square tests were performed to determine if there were significant differences among the three school types. If this test was significant, three two-way chi-square tests were run to determine which school types were significantly different. A result was considered significant if $p < .05$. For the two continuous variables (years of teaching experience and grade level), a one-way ANOVA (Scheffe test) was used to test for differences between the school types.

[b] Start-up schools are significantly different from model schools.

[c] Preconversion schools are significantly different from model schools.

RESULTS OF COMPARISONS ACROSS SCHOOL TYPES

Are There Differences between the Model, Start-up, and Preconversion High Schools on the Key Attributes of Effective Schools Identified by the Foundation?

The first step in our discussion of school differences is to examine the extent to which schools differ on key attributes of effective schools that have been the focus of foundation efforts and linked in the research literature to outcomes for students (e.g., graduation rates, college entrance exam taking, and postsecondary education enrollments). To this end, we have created a number of constructs from the survey data to reflect attributes of schools and instruction. A brief description of these constructs is provided below, along with results of analyses comparing the three school types.

Normative Climate

Research suggests that schools with a positive normative climate provide a strong, supportive environment, which encourages students' intellectual efforts and academic achievement. In Chapters II, III, and IV, we discussed three aspects of normative climate: high expectations, personalization, and respect and responsibility. Moreover, as discussed in Chapters III and IV, we learned that a safe and orderly school environment is an important feature of the schools' normative climate and a necessary precursor to the development of effective learning environments. To further this discussion, we developed scales to measure each of these aspects of normative climate, including safety and orderliness:

High expectations. This aspect includes teacher survey items that describe the extent to which teachers believe that their peers set high standards for student learning, set these high standards for all students, and set high expectations for their own teaching. Student survey items associated with this construct indicate the extent to which students believe teachers expect them to do well, track their progress, and work to make sure they are learning.

Personalization. Teachers indicated how well they knew students in the school (e.g., the proportion of students for whom they knew their families, and their academic aspirations). Students indicated the extent to which teachers provided them with extra help, cared about them, and provided them with guidance.

Respect and responsibility. Students indicated the extent to which their peers respect one another, feel it is okay to destroy school property, cheat, or fight. Teachers indicated the extent to which both teachers and students treat one another with respect.

Safe and orderly climate. We measured safe climate using student and teacher responses to items such as the extent to which they feel safe in and near school. We also used student items to indicate how orderly the school climate is (e.g., how frequently there is fighting and bullying in school).

Models and start-ups had more positive normative climates than preconversions on every dimension of normative climate, except safety and orderliness (see Figures V-1 and V-2).[9] Specifically, both teachers and students reported higher expectations for student learning, greater personalization, and more respect and responsibility in model and start-up schools than in preconversion high schools.[10] Moreover, teachers reported higher levels of respect and responsibility in model schools, compared with those in start-up high schools. Although teacher accounts of their own feelings of safety did not vary significantly by school type, students reported a greater sense of safety and orderliness in model and start-up schools than did students in preconversions. All of these differences would be considered large by most standards in social science research.[11]

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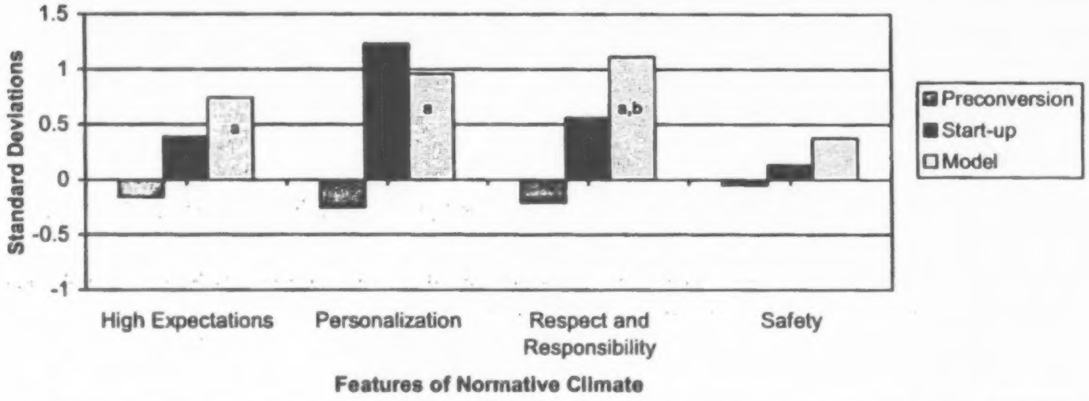
[9] The means shown in the figures are adjusted, based on HLM models that control for student and teacher background characteristics (see Appendix B). The means can be interpreted in standard deviation units because all dependent variables were converted to z-

Figure V-1
Means for Features of Teacher-Reported Normative Climate, by School Type



a. The mean for the preconversion schools is significantly different ($p < .05$) from the mean for the start-up and model schools combined.

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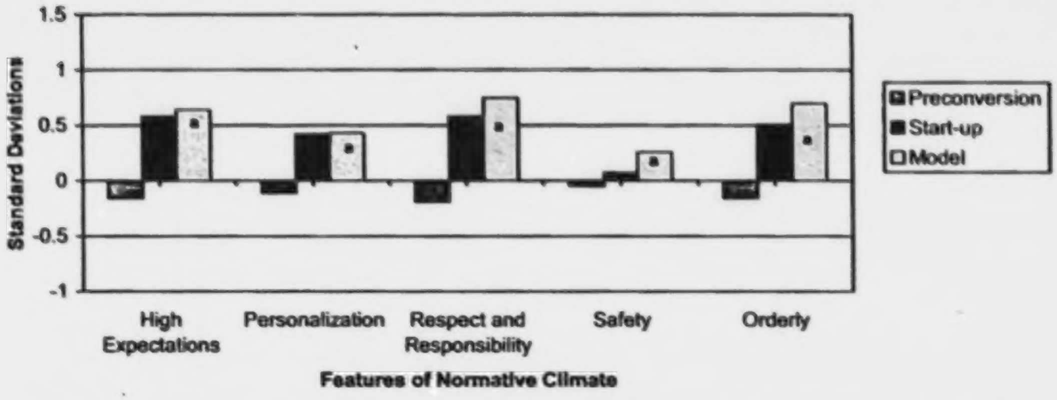
scores. A z-score of "0" equals the mean, a score of "1" equals one standard deviation above the mean, and a score of "-1" equals one standard deviation below the mean.

[10] HLM models for teachers control for subject taught, whether or not they are certified, whether or not they have a graduate degree, and years of experience at the individual level. Differences in student composition were not controlled for in the teacher models. HLM models for students control for gender, race/ethnicity, parents' education, language other than English spoken in the home, and grade level at the individual level.

[11] Because all variables in these statistical models have been standardized, the coefficients can be interpreted as effect sizes. Effect sizes of .1 to .3 are considered small, >.3 to .5 are moderate, and >.5 to 1.0 large (Cohen & Cohen, 1983).

Figure V-2
Means for Features of Student-Reported Normative Climate, by School Type



a. The mean for the preconversion schools is significantly different ($p < .05$) from the mean for the start-up and model schools combined.
b. The mean for the start-up schools is significantly different ($p < .05$) from the mean for the model schools.

Powerful Teaching and Learning

In addition to examining the professional community and normative climate of the schools, we also sought to better understand the instructional activities that occurred in the schools. Although we understand the limitations of capturing a complex dynamic such as teaching and learning with survey items, we have created a number of measures that, at the very least, provide indications of the instructional approaches that teachers in these schools think they are implementing.

In Chapters II, III, and IV, we focused on four dimensions of classroom instruction: active inquiry, in-depth learning, the use of performance assessments, and the use of technology as a tool. Here, we focus on the differences between the three school types in their instructional practices. To provide some contrast to the foundation's attributes, we also discuss teachers' use of traditional instruction and time spent preparing for standardized tests. For this discussion, we created measures for these constructs. The dimensions and measures of instruction that we investigated include:

Active inquiry. This measure includes the emphasis teachers place on guiding student research and analysis and how often students decide how to present what they have learned, and how often they defend their views and ideas.

In-depth learning. This measure includes the emphasis teachers place on helping students explore topics in depth and how often students research topics deeply enough to become subject experts.

Performance assessment. This measure includes how often teachers use open-ended problems, portfolios, demonstrations, exhibitions, and oral presentations to assess student development.

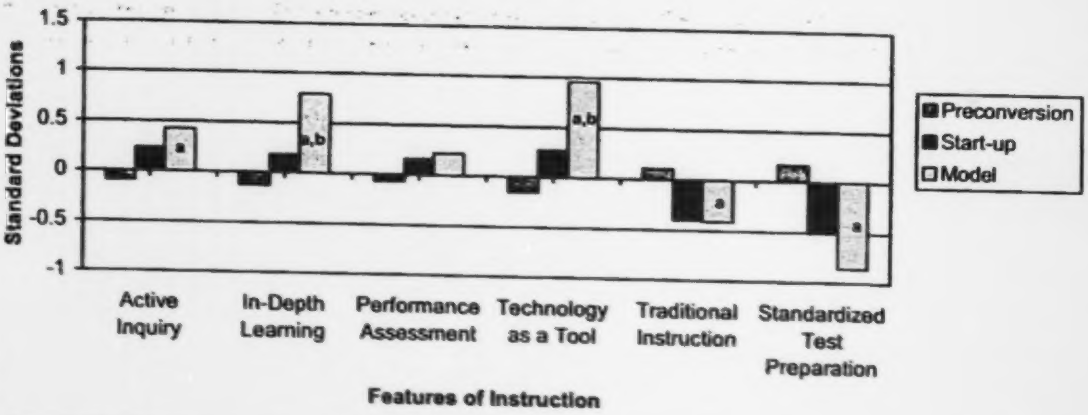
Technology as a tool. This measure includes teacher reports of how often students use technology for writing, exploring ideas, analyzing information, and communicating about academics.

Traditional instruction. This measure includes teacher reports of the emphasis they place on helping students learn procedures and facts, how often teachers lecture, and how often teachers have students memorize facts, definitions, and formulas.

Standardized test preparation. This measure includes teacher reports of how much emphasis they place on covering materials in state and district content standards and tests, and how often teachers measure student performance on multiple-choice tests and prepare students for standardized tests.

Teachers in model and start-up schools used more active inquiry and in-depth learning than did teachers in preconversion schools (see Figure V-3). Generally speaking, differences in the use of active inquiry and in-depth learning by teachers in schools of different types are moderate. The exception is the difference between models and preconversion schools in the use of in-depth learning; these differences are large. Teachers in models and start-ups also used technology as a tool with greater frequency than did teachers in preconversions. These differences are moderate (start-ups compared with preconversions) and large (models compared with preconversions). On the other hand, teachers in preconversion schools used traditional instructional approaches and spent time preparing for standardized tests more often than teachers in models and start-ups. These differences are large. There were no significant differences in teachers' use of performance assessments.

Figure V-3
Means for Features of Instruction, by School Type



a. The mean for the preconversion schools is significantly different ($p < .05$) from the mean for the start-up and model schools combined.

Teacher Professional Community

In previous chapters, we talked about common focus and time for collaboration. Here, we examine these, as well as collegiality and reflective professional dialogue. A key component of a school's professional community is the collegiality among teachers, or the degree to which teachers are supportive of one another. According to Marks, Secada, and Doane (1996), a reflective professional dialogue refers to teachers' engagement in conversations about practice, student learning, and pedagogy. Using survey data, we characterized teachers' professional community by teachers' reports of four dimensions that describe their schools:

Common focus. This dimension is measured by using teacher reports of the extent to which teachers in their schools share a vision or the same mission.

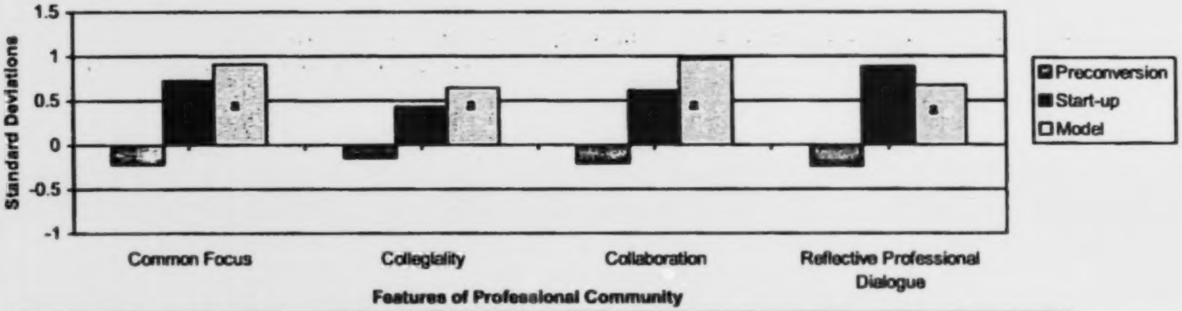
Collegiality. Teachers responded to inquiries about the degree to which teachers in the school feel that they are supportive of one another.

Collaboration. This measure includes teacher reports of how often teachers observe one another or co-teach.

Reflective professional dialogue. Teachers responded to how often they formally or informally discuss aspects of the school's structure, governance, curriculum, and instruction.

Results presented in Figure V-4 indicate that teachers in models and start-ups described a significantly stronger teacher professional community than teachers in preconversions. Specifically, the degree of common focus and collegiality and the amount of collaboration and reflective professional dialogue were all higher in start-up and model schools than in preconversion high schools.[12] These differences should be interpreted as large.

Figure V-4
Means for Features of Teacher Professional Community, by School Type



a. The mean for the preconversion schools is significantly different ($p < .05$) from the mean for the start-up and model schools combined.

Distributed Leadership

In Chapters II-IV we discuss distributed leadership. Here, we measure two aspects of distributed leadership:

- *Decentralized decision-making*. This concept includes several components: (1) teacher influence on school decisions (e.g., choosing school programs or reforms, hiring staff, and selecting content of professional development activities) and on classroom decisions (e.g., setting the instructional pace and goals and objectives for student learning), and (2) the influence of "outside" organizations on the school (e.g., state, district or grantee, school board, and teacher unions).

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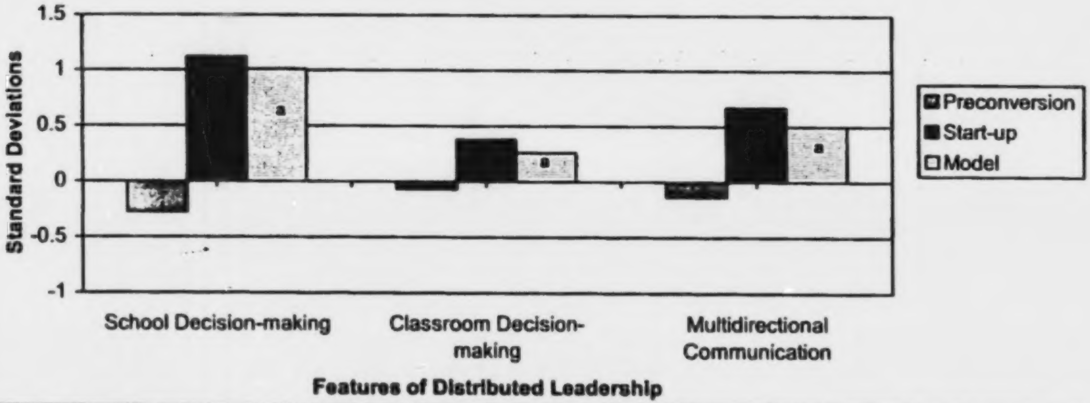
[12] This pattern of results suggests that models may have higher levels of professional community than start-ups, but the statistical test of the difference between these two school types was not significant (possibly because of the small number of model schools in the sample).

- *Multidirectional communication.* This measure combines teacher reports of how well the principal encourages and participates in discussions with teachers.

Teachers in model and start-up schools reported more decision-making power, within both the school and the classroom, and more multidirectional communication than did teachers in preconversions (see Figure V-5). Principals in preconversion high schools responded that many "outside" organizations (e.g., school board, state offices) had a greater influence on their schools than did principals in start-ups and models. (See Table V-2). All of these differences are large. Many model and start-up schools are charter schools: one feature of charter schools is that they are excused from much of the district and state oversight. As a result, charter schools have more decision-making flexibility than do traditional schools.

Figure V-5
Means for Features of Distributed Leadership, by School Type



a. The means for the preconversion schools is significantly different ($p < .05$) from the mean for the start-up and model schools combined.
b. The mean for the start-up schools is significantly different ($p < .05$) from the mean for the model schools.

Table V-2
Difference in School Means in Principal-Reported Influences on the School, by School Type

	School Type Means[a]		
	Preconversion	Start-up	Model
Influences from Individuals Outside of the School			
State-level offices	3.8[b]	2.9	2.4
District or chartering organization administrators	3.8[b]	2.7	2.4
Local school board	3.8[b]	2.3	2.0
Teachers' associations or unions	3.0[b]	1.5	1.0

Source: Principal survey, spring 2002.

[a] The response options were as follows: 1 = Not at all, 2 = To a small extent, 3 = To a moderate extent, 4 = To a major extent.

[b] The mean for the preconversion schools is significantly different ($p < .05$) from the mean for the start-up and model schools combined.

Academic Organization

The academic organization of the school refers to such features of schools as the division or integration of curricular content and students' opportunities to learn (e.g., grouping or tracking, the number of academic courses available, and variation in students' courses of study in the same school). American high schools are typically organized so that different students have very different learning opportunities (Oakes, 1985).

We measure the academic organization of the school by using three dimensions: instructional coherence, class structure, and tracking.[13]

Instructional coherence. This measure includes teacher reports of the extent to which the school supports programs linked to curriculum, instruction, and assessment, and that professional development supports the implementation of a common curricular, instructional, or assessment approach.

Class structure. This includes two measures from the principal survey: whether there are formal class periods and the length of class periods.

Tracking. This is a principal report of whether the school tracks students by ability.

Results presented in Figure V-6 indicate that teachers in start-up and model schools reported higher levels of instructional coherence than did teachers in preconversions. These differences are large. Although the pattern of results in principal descriptions of class structure and tracking suggest that longer class periods are more common in start-up schools and ability grouping in core subjects is more common in preconversions, the differences by school type were not statistically significant. The lack of significant differences is probably due to the small size of the principal survey sample (see Table B-6 in Appendix B).

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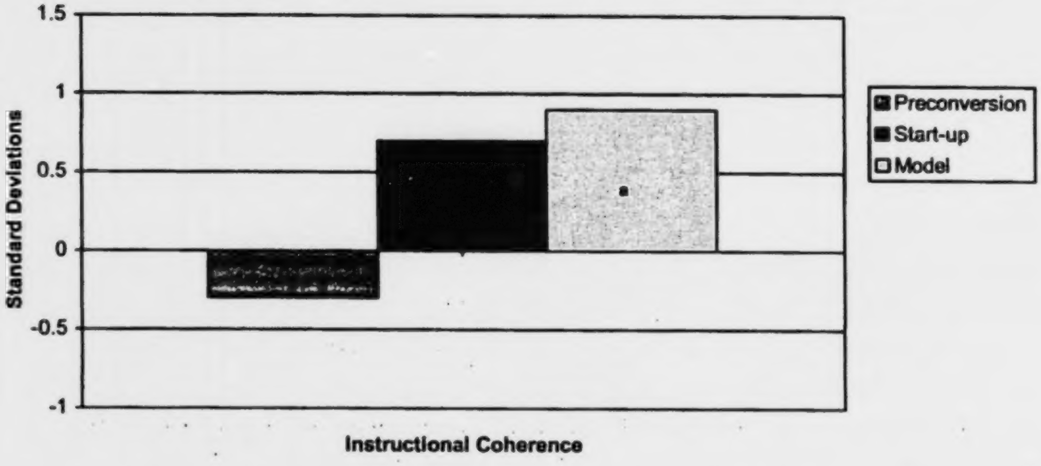
[13] In the previous chapters, performance-based decision-making was discussed. There were items on the principal survey to assess this school feature: principals indicated if their school had performance targets for course advancement, grade promotion, and graduation. There were no significant differences between school types on these items. This may be due to the small number of principal surveys returned. We will revisit these items in future years.

Figure V-6
Means of Teacher-Reported Instructional Coherence, by School Type



a. The means for the preconversion schools is significantly different ($p < .05$) from the mean for the start-up and model schools combined
b. The mean for the start-up schools is significantly different ($p < .05$) from the mean for the model schools.

Do These Schools Differ on Features That Are Expected to Promote the Implementation of the Attributes?

In the previous chapters, we examined the implementation process for start-ups and preconversions and speculated on some of the reasons why the reform strategies may lead to different types of learning environments for students and teachers. In this chapter, we draw explicit comparisons between some additional characteristics of schools to help us better understand why their learning environments might differ. Specifically, we explore constructs from the conceptual framework that guides our evaluation and consider features of schools that may either facilitate or hinder the implementation of reform.[14] For the purposes of this evaluation, we are examining a number of dimensions of the schools' capital (e.g, human, material, and social), as well as an indication of the schools' funding flexibility. These features are described below.[15]

Human Capital

As described in Chapter II, a few of the most important types of human capital are teacher content knowledge and pedagogical skills, quality and stability of school leadership, and parental involvement in schools. For this evaluation, we have included the follow measures of human capital:

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[14] See Appendix A for a discussion of the conceptual framework.

[15] Other aspects of human, material, and social capital (such as adequacy of facilities) are discussed in Chapters III and IV.

Teacher preparedness. This measure combines how prepared teachers felt to implement new teaching methods, state or district curriculum and standards, technology integration, and student performance assessments.

School leadership. This measure combines teachers' perceptions of their principal as being good at getting resources, having confidence in their teaching expertise, dealing well with outside pressure, and being aware of problems faced by staff.

Parental involvement. This measure combines teachers' reports of how often they involved parents in setting learning objectives for students and in judging student work, and provided parents with exemplars of work.

Material Capital

Chapter II describes material capital as the resources that organizations can call on to initiate and sustain their activities, including such important resources as instructional materials and adequate physical facilities. Here, we examined the following aspects of material capital:

Instructional materials. This measure combines teacher reports on how often the following are available to them: technology, textbooks, supplementary textbook materials, test score data, copies of school standards, and library materials.

Instructional resources. This measure combines teacher reports of how often the various kinds of specialist resources are available on-site, such as classroom aides, subject matter specialists, reading specialists, and special education resource teachers.

Social Capital

Chapter II defines social capital as a network of relationships that organizations have that encourages trust and information sharing and, ultimately, cooperative action. Here, we investigate two measures of social capital:

Community Resources. This measure combines teacher reports of how often they use the resources in the community. These uses include bringing in community members to act as guests, taking the students on field trips to meet with community members, or using the diversity of the community to inform class discussions.

Staff, Parent, and Community Support. These items include principals' responses on the degree to which staff, parent, and community opposition or apathy is a barrier to reform.

Funding Flexibility

In addition to examining schools' capital, we also sought to understand the extent to which schools have flexibility in using their capital. Specifically, we focused on one key feature of material capital—funding—and asked principals the extent to which the lack of flexibility in allocating resources presented a barrier to accomplishing their school goals.

Among all seven dimensions of capital, only four are significantly related to school type. There were significant differences in human capital (see Figure V-7). Teachers in models and start-ups reported feeling more prepared to implement new teaching methods than did teachers in preconversion schools.

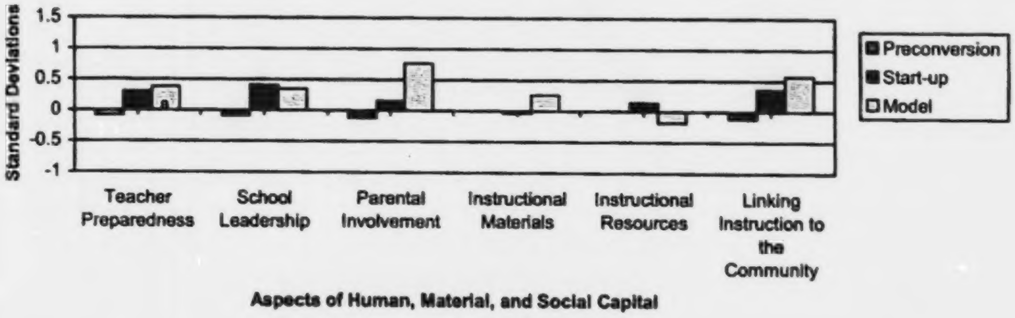
Both differences are moderate. Although teachers in preconversion schools reported more years of teaching experience, it is possible that model and start-up schools have the flexibility and incentives to attract teachers who come more prepared to meet the instructional demands of these schools. Teachers in models and start-ups also reported higher levels of involving parents in instruction. The difference is large for models, but small for start-ups. There was, however, no difference between school types in teachers' perceptions of the quality of the school leadership. If differences existed, they may have been undetected because variance between schools within a school type was large for this feature (see Table B-7).

For the two dimensions of material capital (instructional resources and instructional materials), there were no significant differences by school type (see Figure V-7). As mentioned above, differences may be masked because variance between schools within a school type was large for both of these features (see Table B-7).

Finally, there were significant differences for both of the dimensions of social capital. Teachers in model and start-up schools reported using community resources more often than teachers in preconversions (see Figure V-7). This difference is large for models and moderate for start-ups. Principals' perceptions of barriers due to a lack of staff, parent, and community support differed significantly by school type (see Table V-3). Specifically, principals in preconversion schools reported more parent, community, and staff apathy and opposition than did principals in start-ups and models.

With respect to flexibility in using capital (instructional resources and instructional materials), principals in preconversions reported that the lack of flexibility in allocating resources was more of a barrier than did principals in start-ups and models. The flexibility in allocating resources is likely to be tied to the status of the schools as charter or traditional public institutions. Charter institutions enjoy a degree of autonomy over resources that other public schools do not.

Figure V-7
Means for Aspects of Human, Material, and Social Capital, by School Type



a. The mean for the preconversion schools is significantly different ($p < .05$) from the mean for the start-up and model schools combined
b. The mean for the start-up schools is significantly different ($p < .05$) from the mean for the model schools.

Table V-3
Difference in School Means in Principal-Reported Barriers to Reform, by School Type

	School Type Means*		
	Preconversion	Start-up	Model
Barriers to Reform			
Parent/Community opposition	1.8 •	1.0	1.2
Parent/Community apathy	2.5 •	1.6	1.2
Staff opposition	2.3 •	1.3	1.2
Staff apathy	2.0 •	1.0	1.4
Inflexibility of resources	2.2 •	1.3	1.4

Source: Principal survey, spring 2002.

*The response options were as follows: 1 = Not at all, 2 = To some extent, 3 = To a moderate extent, 4 = To a major extent.

•The mean for the preconversion schools is significantly different ($p < .05$) from the mean for the start-up and model schools combined.

Do These Schools Differ on Key Measures of Student Development?

In previous sections of the chapter, we identified differences in school attributes and in factors thought to promote implementation of these attributes. Here, we examine the relationship between school type and a number of key outcomes for students: their academic self-concept, engagement, sense of belonging, and satisfaction with schooling. Although it is too early in many of these new schools to examine measures of academic development (such as changes in graduation or postsecondary enrollment rates), we expect that several intermediate outcomes will be related to changes in the schools' environment.

Academic self-concept, engagement, belonging, and satisfaction are intermediate outcomes that are both products of effective schooling and precursors to future academic development. For example, an emerging body of theoretical and empirical work on students' engagement with school suggests that engagement is an essential step in our understanding of the process of student learning. Newmann, Wehlage, and Lamborn (1992) define academic engagement as students' psychological investment in and effort directed toward learning. For this investigation, engagement is examined along two dimensions: interest and persistence. Students' satisfaction with the education they are receiving in their schools may also contribute to their academic development. Specifically, they may be more motivated and committed to the tasks that they are asked to accomplish as part of their schooling experience if they believe that their schooling is having a positive impact on their learning. In our student survey, satisfaction was measured along two dimensions: academic progress and social responsibility.

In addition to engagement and satisfaction, learning requires risk taking, which often depends on whether students feel emotionally safe. Learning also requires that the learner be able to make a connection between his or her prior knowledge and the new knowledge being presented. Specifically, students need to feel a sense of competence and connection with others to feel safe enough to process new information effectively and to take the chance that they will make mistakes (see Osher, Woodruff, Smerdon, & O'Day, 2003). We operationalize this notion of safety by using two constructs: academic self-concept and sense of belonging. The student outcomes used in these analyses included the following:

Engagement. This concept has two dimensions that were analyzed separately: interest (e.g., student reports of how often they asked questions or contributed in class, and met with teachers about grades, assignments, or work) and persistence (e.g., student reports of how often they got frustrated when school work was too hard, gave extra effort on challenging assignments or projects, or got extra help when school work got difficult).

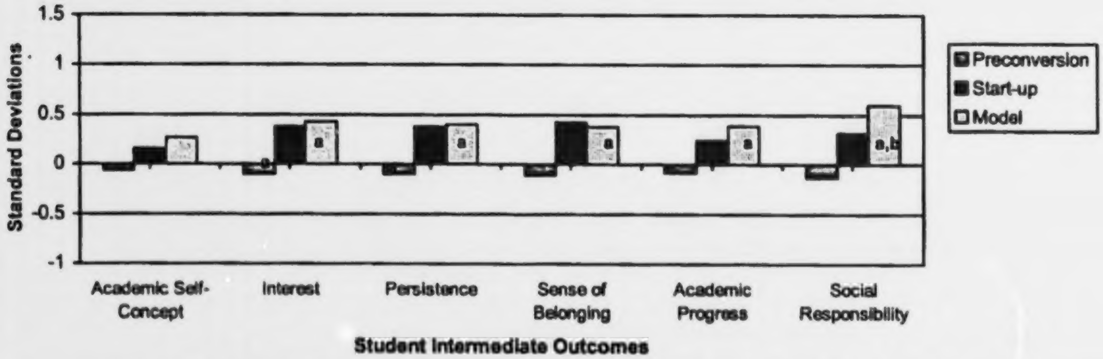
Satisfaction. This concept has two dimensions: academic progress (e.g., student reports of how well they feel they have been taught to be a good reader, analyze and solve math problems, and write clearly and effectively) and social responsibility (e.g., student reports of how well they feel they have been taught to be responsible members of their community, respect the opinions of people of different backgrounds, and think critically about current events).

Academic self-concept. Students reported the degree to which they felt they were good at getting help, working with others, reading, writing, and learning mathematics.

Sense of belonging. Students reported how much they felt that they were a part of the school and fit in with other students, and how much they participated in school activities.

For every dimension, students in model and start-up high schools reported higher intermediate outcomes than did students in preconversion high schools (see Figure V-8).

Figure V-8
Means of Student Intermediate Outcomes, by School Type



a. The mean for the preconversion schools is significantly different ($p < .05$) from the mean for the start-up and model schools combined.
b. The mean for the start-up schools is significantly different ($p < .05$) from the mean for the model schools.

Students in the model and start-up schools felt more positive about their ability to be academically successful, were more interested in their schoolwork, were more persistent when assignments were challenging, felt more active in and connected to the school community, and were more satisfied with their academic and social education. All of these differences between preconversion schools and model and start-up schools are large. Moreover, students in model schools reported greater satisfaction with schooling on social responsibility than did students in start-ups. This difference is large.[16] Again, we remind the reader that it is important to consider that start-up and model schools are schools of choice and as such may be more likely than the preconversions to have students and families that are particularly motivated to learn.

SUMMARY

This chapter examined differences among school types—models, start-ups, preconversions—on key attributes identified in the literature and by the foundation as characterizing effective schooling. This examination improves our understanding of the extent to which schools that are designed to provide a more effective schooling experience for students actually differ from preconversions (i.e., traditional, large high schools). With very few exceptions, we found that models and start-ups had more positive professional communities for teachers, had more positive normative climates for students, and practiced more "authentic" instructional techniques than did preconversion high schools. Moreover, the differences in professional community and normative climate are quite large. For nearly every feature, however, start-ups and models did not differ from one another. The only exceptions were respect and responsibility and technology use. On these two attributes, model schools were higher than start-ups. (It is important to note, however, that there are only five model schools in the sample, making it difficult to detect significant differences between models and start-ups.)

In an attempt to explore factors that may promote implementation, we examined a number of additional features of these schools. Models and start-ups, those with a greater instantiation of key attributes of effective schools, had teachers who reported a greater degree of preparedness for implementing the effective-schools attributes and more parental involvement than preconversions. Models and start-ups also had greater flexibility in the use of resources and less "outside" influence than preconversions.

Finally, we examined intermediate outcomes for students—academic self-concept, interest, persistence, sense of belonging, academic progress, social responsibility—to begin to understand potential relationships between these outcomes and school type. Students in start-ups and models reported more positive intermediate outcomes than did students in preconversion high schools. It is important to note, however, that although we did control for students' grade level and various demographic characteristics, we were not able to control for a number of important characteristics that may explain these differences, particularly students' prior ability or achievement levels. All of the findings in this chapter should be considered preliminary and descriptive rather than causal or definitive.

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[16] It is also important to note that for many of these outcomes, there are significant differences by race/ethnicity and parents' education (see Appendix B). These differences vary significantly across schools (e.g., the differences between white and black students on academic self-concept are larger in some schools and smaller in others). However, we do not have a large enough sample size this year to determine if the race/ethnicity differences vary by school type.

CHAPTER VI

THE INTERMEDIARY ORGANIZATIONS CREATING SMALL SCHOOLS

The schools described in Chapters III through V are all associated with one or more of 12 intermediary organizations receiving funding from the Bill & Melinda Gates Foundation for the purpose of creating small, effective high schools. In this chapter, we discuss the small-schools initiative's progress and issues at the grantee level, examining grantees' strategies, progress, and capacity for the work of creating small high schools. The information presented in this chapter is derived primarily from spring 2002 interviews with 47 individuals in the grantee organizations or working closely with those organizations. Interviews with grantee staff conducted in 2001, documents provided by the grantees, and survey responses of school principals supplemented the 2002 interview data.

GRANTEE GOALS AND APPROACHES

While sharing the common goal of supporting the creation of small, effective secondary schools, these organizations are addressing this goal through a range of starting points and strategies. Among the 12 grantee organizations, 7 are starting new schools, 1 is converting large high schools into smaller learning communities, and 4 are pursuing both of these reform strategies. This difference in approach is shown, along with other features of the grantees' strategies, in Table VI-1.

As described in Chapters III and IV, this distinction between a new-school and a school-conversion strategy is not as clear-cut as it may appear at first blush. As the grantees' work proceeds, they are developing variants of the two strategies that blur the category boundaries. In some cases, for example, organizations with grants to start new small schools are working with an existing program or school-within-a-school; the resulting new small school may share a site with the large, comprehensive school from which it emerged. School conversions in some cases are also starting with existing within-school academies or programs and building on them by creating additional small learning communities. Several of the grantees funded to create new schools are working with an existing small school to restructure it in ways that reflect the foundation's effective-school attributes, rather than starting a small school from scratch.

Whether they are starting new schools or converting large high schools, grantees do not see their goal as producing a set of small schools that all look alike. All of the grantees appreciate the fact that every school will have its own character, shaped by the particulars of its staff, students, and community context. The grantees do differ, however, in terms of how much similarity they expect across the schools resulting from their work. On the basis of the stated intentions of grantee staff and the nature of the supports the grantees provide to their school teams, we have classified grantees' intended replication targets: Four intend to start schools that replicate a school design, three want schools in their network to share a set of design principles, and five describe a process that they expect local teams to use in developing their own school designs.

Table VI-1
Grantee Features and Strategies

	Aspire	**BayCES**	**Big Picture**	**CCE**	**CSC**	**CCC**	**EdVisions**	**High Tech**	**MSSP**[a]	**NCLR**	**NTF**	**New Visions**
Year of grant	2000	2000	2000	2000	2000	2001	2000	2000	2000	2000	2000	2000
Grant amount (in 000s)	$3,187	$15,721	$4,110	$5,914	$8,000	$8,062	$4,430	$6,395	$5,152	$6,753	$4,935	$10,000[c]
Replication target	School Design	Process	School Design	Design Principles	Process	Design Principles	School Design	Design Principles	Process	Process	School Design	Process
District linked	No	Yes	No	Yes	Yes	No	No	No	Yes	No	No	Yes
Number of states	1	1	Up to 9	2	2	1	2	Up to 9	8	up to 15	1	1
Number of schools to convert planned under the grant	0	7	0	Included with new	10	3	0	0	0	0	0	Included with new
Number of new high schools planned under the grant	5	2	9	20[b]	0	4	15	9	8	5+	9	35-60[b]
Large high schools converted in fall 2001	0	0	0	1	0	1	0	0	0	0	0	0
Start-up small high schools opened in fall 2001	1	2	0	5	1	0	4	1	2	3	0	0
Small learning communities created from school conversions by fall 2001	0	0	0	5	0	3	0	0	0	0	0	0
Total number of small schools/learning communities opened in fall 2001	1	2	0	10	1	3	4	1	2	3	0	0

Source: Proposals to Bill & Melinda Gates Foundation and interviews with grantee staff.

Note: Some grantees changed plans and school funding formulas after grant award.

[a] Awarded to University of Washington in 2000; moved in 2001 to KnowledgeWorks Foundation.

[b] May be new or created through conversions.

[c] Excludes contributions from Carnegie Corporation and the Open Society Institute.

Three of the four grantees trying to replicate a school design (Big Picture, EdVisions, New Tech) had a model high school in place prior to the receipt of foundation funds. As noted in Chapter I, two other grantees (High Tech and BayCES) also had model schools. What sets Big Picture, EdVisions, and New Tech off from the other grantees with model schools is their expectation that certain key features or activities of their model schools will be implemented by the new schools they are helping to start. In contrast, High Tech stresses that it is the High Tech design principles that are to be replicated, not so much the particular instantiation of those principles that is found in High Tech High San Diego. BayCES considers Leadership High a model for other school design groups but is clearly not expecting other schools it works with to come up with the same school design.

All of the grantees with model schools expect these schools to be a source of inspiration and ideas, motivating educational leaders who visit the schools to want to start something similar in their own communities. Big Picture, EdVisions, High Tech, and New Tech expect their model schools to provide concrete assistance to the new schools they are helping to create, as well. Part of that assistance is in the form of articulating a set of design principles or essential elements for others to incorporate in their own designs. The model schools' building designs, technology plans, business plans, and operations procedures for the nuts and bolts of running a small school are made available to school design teams and new schools in these grantees' networks. Several grantees described their model schools' contribution to replication as a continuous process: Big Picture and High Tech High refer to their model schools as "R&D centers," where innovations can be tried and tested before they are passed on to other, newer schools in the network.

A third important dimension of grantees' strategies is the extent to which they are trying to work through districts, as opposed to working around them. Again, the distinction is not absolute, but five of the grantees are working closely with districts and expect not only to create small secondary schools (through establishing new schools or converting large ones) but also to have an impact on the district's policies toward and support for such schools. These *district-linked* grants thus have more elements of systemic reform than do those clearly school-focused grants that tend to include work with districts primarily to the extent necessary to support the specific schools in the grantee's school network.

Although the grants were awarded at different times (as shown in Table VI-1), it appears that grantees starting new schools can get a program in place faster than those trying to convert existing large high schools. By 2001-02, only two large high schools had converted fully into smaller learning communities (another had converted partially); in contrast, 19 new schools supported by foundation grantees had opened their doors to students. It is too early to judge the effects of the more systemic approach taken by the district-linked grants on implementation (e.g., whether it will slow down the implementation work, whether it will result in greater likelihood of sustained programs after the grant ends).

Size and Scope of the Grantees' Efforts

The grants received by the 12 organizations differed significantly in size, ranging from a little over $3 million to almost $16 million. Similarly, there was extensive variation in the number of small schools expected to result from the grantees' work over a 5-year period. As shown in Table VI-1, the grantee (Aspire) with the most modest award proposed to work with as few as 5 schools, while another (New Visions, which received significant funding from two other foundations for the same initiative) proposed to help start 35 to 60 schools. Excluding this latter grantee, the remaining grantees proposed to work with an average of 9.5 schools during their 5-year grant period. (This number includes large, preconversion high schools that are expected to be restructured into roughly 4 to 6 small schools or academies each.) Several grantees modified the number of schools with which they planned to work after they made their proposals to the foundation. BayCES, for example, concluded that Oakland was not ready to convert all of its high schools and negotiated an understanding with the foundation that it would work on converting just two Oakland high schools. In its first year, NCLR awarded planning grants to a larger number of schools than proposed (31, not all of which were high schools), with the expectation of receiving additional funding from other sources. Big Picture received an additional foundation grant to support the opening of four new small schools in Providence, and CSC received an additional grant for the purpose of starting new small high schools in St. Paul. (These new grants are not included in this evaluation study.)

Grantees vary in their stress on geographic proximity to their school sites. Among the grantees pursuing a district-linked strategy, the foundation-supported work of BayCES and New Visions is concentrated primarily within one large, urban district (although BayCES does some work with another nearby district and advises two others). CCE, CSC, and MSSP work with multiple districts in multiple states. CCC works with multiple districts within Colorado. Aspire and New Tech are less concerned with district change but do plan to limit their work to a single state (California), where they can have greater access to all of their schools and better knowledge of the legal and political context within which their schools operate. EdVisions plans to work in two contiguous states (Minnesota and Wisconsin). In contrast, Big Picture, High Tech High, and NCLR view their school networks as national in scope and will have schools across the country.

Target Students and Outcomes

The foundation believes that America's comprehensive high schools serve few students well and is particularly concerned about the mismatch between these institutions and the needs of those students coming from the least economically advantaged backgrounds. An explicit goal for the foundation is closing the gap between high school graduation, achievement, and college completion rates for African-American and Hispanic students compared with those for white and Asian students. The National School District and Network Grants Program grantees were selected because of their commitment to creating small schools in which traditionally underserved student groups would succeed.

Several of the grantees have somewhat more specific student populations in mind. Four of them talked about wanting to serve a population of urban youth, and all of the new schools in the 2001-02 sample were located in urban areas. NCLR focuses on Hispanic populations and English language learners. New Tech offers a somewhat different perspective. While drawing from ethnically and culturally diverse areas that combine a modest-sized city with outlying agricultural areas, it hopes to serve the "average student" who would otherwise entertain low ambitions for completing education beyond high school or entering a demanding career. None of the grantees cited students needing special education services as a particular focus for their work. Next, we consider the outcomes that grantees emphasize for students who will be attending their schools.

Although many of the grantees feel standardized tests are overemphasized, the most commonly mentioned desired outcome is raising students' test scores.

When asked to discuss their goals for students coming out of their schools, all of the grantees talked about student achievement in one form or another. Eight of them specifically mentioned improved test scores. Two grantees spoke explicitly about reducing the gap in test scores for more and less advantaged student groups. Two grantees cited better performance against state academic standards as a desired outcome. A number of grantees spoke also about improving achievement as demonstrated through performance assessments or exhibitions or through portfolios of student work.

Some grantees spoke about more specific achievement goals. Five cited improvement in reading or basic skills as a desired outcome. Four cited life or work skills as an area in which they want their schools to make a positive difference. New Tech specifically cited technology skills as an aspect of work preparation where they expect their students to excel. CCC expects the students graduating from the high-tech high schools it will help start to be taking mathematics and science courses within Colorado's university system. NCLR has the goal of producing students who are biliterate and bicultural, having acquired fluency in English or recaptured Spanish.

Grantees also stress attitudinal and behavioral outcomes for students.

Seven of the grantees cited "softer" attitudinal and behavioral predisposition outcomes as goals. CCC, CCE, CSC, EdVisions, and New Visions spoke of schools that would lead to engaged, "positive" student attitudes. New Tech staff expect students to assimilate the values of trust and responsibility underlying their school design. EdVisions staff stress the importance of supporting students' development as individuals with the self-discipline to manage independent projects. Big Picture wants to produce graduates who will "follow their passions."

Partnership Strategies

The grantees do not expect to be able to accomplish their school development and support work alone. Most of them expect to be working with other organizations to gain support for small high schools, to design the schools, and to put them into operation.

Almost half of the grantees expect to accomplish their goals by working closely with selected districts.

As described above, five of the grantees think of themselves as working in partnership with one or more districts. To meet their goals, these district-linked efforts need to shape district policies and practices and to harness district resources for small schools.

BayCES notes that since its grant was awarded, the Oakland Unified School District has become less the partner originally envisioned and more of a client for BayCES services. Nevertheless, BayCES remains committed to influencing district policies and helping the district learn how to help new small schools.

> We have to know how to help the schools ask for things and know how to help the district serve the needs of the schools—and these two things can compete for our attention. It is a struggle to mesh and balance them.

In RAND's evaluation of the New American Schools, it was noted that intervention designs that attempt to influence the education system and not just the school need to deal with and influence more actors to make progress on implementation (Bodilly, 1996). On the other hand, engaging districts as partners increases the likelihood of being able to draw on district resources and may pave the way for the removal of barriers attributable to district policies.

The remaining grantees are likely to negotiate and interact with districts around the establishment of a specific school but are clearly pursuing a "school" rather than a "district" strategy (although they may expect their strategy eventually to influence high school reform on a national level). They are more likely to expect their schools to operate in a charter status and, in some cases, perform some of the functions of districts themselves.

Many different kinds of partner organizations are engaged in this work.

A number of the grantees have partnerships with institutions of higher education either in place or in the negotiation stage. They plan on having these partners provide courses and cross-credit with their new small high schools.

Three grantees expect partnerships with local business organizations to be an important part of their implementation strategy. Business partners provide both sites for student internships and important political support within the community. Both Big Picture and High Tech High spoke of the advantages not only of having business organizations partnering in this way but also of having a specific entrepreneur to act as your "angel" when you try to start a new small school.

BayCES and New Visions staff talked about the importance of having not just general community support but also a specific community-based organization as a partner during the school creation and design process. New Visions has an elaborated model of the kind of partnership needed to start a small, effective school. To receive New Visions funding, partnerships must include not only the school and its community district, but also a community-based organization (which acts as the fiscal agent for the subgrant) or institution of higher education.

Planned School Size and Rollout Strategy

All of the grantees will be fostering schools that are small by current standards, but some designs call for schools that are more radically small (roughly 100 students), while others plan on secondary schools of around 400.

Grantees promote different solutions to the problem of balancing the desire for personalization with the need for adequate funding.

Two factors push grantees in different directions as they contemplate school size. On the one hand, programs that are serious about tailoring an educational program to each individual student's needs and interests and doing "whatever it takes" to keep that student in school can accommodate only so many students. Big Picture's model school, The Met, serves just 104 students, and EdVisions' Minnesota New Country has just 124 high school students in grades 7-12 (of whom 72 are in high school grades). On the other hand, school funding formulas operate on a per pupil basis. This is true of state funds for schools, which are based on average daily attendance (or ADA), as well the foundation's recommended funding algorithm (typically $1,000 per student served by a new small school). Although some school operating costs vary with the number of students served, others are fixed, and economies of scale can be achieved with larger student bodies. It was, in part, just such thinking that led to large, comprehensive high schools, of course, and the grantees are not advocating enrollments above 400. But small school size may pose a challenge in terms of financial viability. Aspire's CEO, Don Shalvey, estimates that it takes 400 students to break even on school operating expenses in California. Schools running this close to the edge will be vulnerable if ADA allocations are reduced in response to state budget deficits. Big Picture wants to preserve the intimacy and individual attention of a school of 100, but recent work on its business plan has led to the conjecture that it may be necessary to cluster four small schools on a campus to get a balance between costs and funding.

Not all of the schools funded through the initiative will cover all four secondary grades. One of the model schools (New Technology High School) comprises grades 11 and 12; a number of schools converting to small learning communities plan focused "senior academies" of 11th and 12th graders focusing on a particular area such as health sciences, fine arts, or communications.

Some of the grantees are involved with schools at elementary or middle school levels as well as high schools. One of the model schools (Minnesota New Country) is grades 7 through 12, and High Tech High will be establishing a middle school on its San Diego campus and one in New Bedford, Massachusetts. BayCES has been focusing more on elementary schools than on high schools in its work with Oakland. Aspire's work prior to the foundation grant focused on elementary schools. Aspire staff make the argument that it is advantageous to have students entering a high school who have had previous educational experiences aligned with the same philosophy. They plan to have schools that either combine middle and secondary grades or that receive students from Aspire "feeder" schools.

SUPPORTS PROVIDED TO SCHOOL PARTNERS

The foundation's theory of change is based on the assumption that if the foundation supports intermediary grantee organizations, these organizations in turn can support a set of new small secondary schools or large high schools converting into small learning communities. There was considerable variation across grantee organizations in the amount and nature of the support they provided to schools or school planning groups during 2001-02. In part, these variations reflect differences in the needs of schools in different contexts and at different stages of development. Differences result also from diversity in the grantees' view of critical implementation factors and in the grantee organizations' various histories and mixtures of expertise. Table VI-2 summarizes the types of supports that grantees reported providing to their schools and school design teams in 2001-02.

Assistance with Community Support, Funding, and Operational Plans

Most of the grantees view *building community and district support* for a new small school or school conversion as a vital early step in implementation. Five of the grantees work extensively with the districts within which their schools are located. As an outside voice, they can advocate for their schools and push for more innovative thinking and policies. Aspire and NCLR are examples of grantees that place less emphasis on developing ongoing relationships with districts but instead help their schools obtain charters. Three grantees cited the support they give school planning groups in developing community support. New Tech's replication director, for example, helps partner districts make the case for opening an experimental, technology-rich school to their communities and their boards.

A very tangible form of support is in the form of *funds*. The foundation's grants assume a "pass through" of funds from the intermediary grantee organization to the schools. However, grantees have great latitude in how this is done. Some grantees provide funding (usually modest) to groups that are in the school-planning phase. Others do not provide funds until a school opens. Implementation funds may be disbursed over several years or given in a lump sum.

To a greater or lesser extent, grantees pass resources on to schools in the form of grantee organization *services*; a few expect to provide little or no cash. Table VI-3 shows the level of financial assistance to schools set forth in the grantees' proposals to the foundation. During the 2001-02 school year, all of the grantees except High Tech and New Tech reported having given funds to schools or school planning teams. Some of the grantees see their financial support as critical to bringing about desired changes.

> The funding is especially critical, as they would not be able to do things they did without funding. The bare-bones funding they get as schools is not enough to start a school.

Beyond such direct funding, a number of the grantees were active in helping their schools raise funds from local sources. New Tech and High Tech High, for example, provide marketing materials and staff resources to help their school partners raise their own funds.

Some of the grantee organizations provide *advice and tools* to support schools' financial and facility planning. Three described helping their schools develop budgets. Aspire, BayCES, and CCC described their efforts in helping schools locate appropriate facilities. Aspire, which runs its own schools, arranges financing for the land and building, where necessary. It is fairly common also for grantees to work with their schools on facilities design. Some grantees offer detailed guidance regarding the design of the schools' information technology infrastructures. Aspire and EdVisions actually perform "back-office" functions, such as payroll, human resources, and accounting, for their schools.

Table VI-2
Grantee-Reported Supports to Schools

	Aspire	BayCES	Big Picture	CCE	CSC	CCC	EdVisions	High Tech	MSSP	NCLR	New Tech	New Visions
Building district support		■		■	■				■			■
Obtaining charter	■							■		■		
Developing community support	■	■	■		■		■				■	
Developing budget	■						■			■	■	■
Finding facilities	■	■				■						
Facilities design	■						■	■		■	■	
Information technology infrastructure design	■							■	■		■	
Back-office functions	■						■					
Curriculum materials							■				■	
Principal professional development	■	■	■	■		■			■	■	■	■
Teacher hiring procedures	■						■	■			■	■
Teacher professional development	■	■	■	■	■	■	■	■	■	■	■	■
Small-schools visits		■		■			■	■	■		■	■
Formal conferences/ workshops	■	■	■	■	■		■	■	■	■	■	■
On-site coaching	■	■	■	■			■	■	■			■
Online materials			■				■	■	■	■	■	
Funding provided in 2001-02	■	■	■	■	■	■	■		■	■		■

Source: Grantee staff interviews.

Table VI-3
Planned Financial Support for Schools

	Aspire	BayCES	Big Picture	CCE	CSC	CCC	EdVisions	High Tech	MSSP	NCLR	New Tech	New Visions
Planning funds per school	Included w/ implementation funds	$50,000 for Berkeley conversion	$50,000	Included w/ implementation funds	$36,000	$250,000 for new; $50,000 for conversion	$10,000	None	Included w/ implementation funds	$50,000	$10,000	$50,000 for new; $250,000 for redesign
Implementation funds per school	$637,400	$350,000 for new; $900,000 for Oakland conversions	$150,000 start-up year; $50,000 per subsequent year	$100,000	$360,000 ($500 per student)	New high tech, $890,000; Sullivan conversion, $660,000; other conversions, $952,500	Up to $140,000 (max. $90,000 per year)	$400,000	$100,000 per district	$250,000	$365,000	$500-$1,000 per student

Source: School funding data from grant proposal to the Bill & Melinda Gates Foundation.

Leader Selection, Training, and Coaching

One of the biggest areas of involvement for several of the grantees is in the selection, training, and coaching of leaders for small schools. Nine of the grantees described leadership development experiences they provide for their current or future schools. Six grantees offered conferences and workshops for their school leaders. Several grantees stress the importance of ongoing informal coaching and mentoring. School leader professional development is offered before the school opens, as well as on an ongoing basis after the school is operating.

Among the grantees, Big Picture provides the most intensive principal professional development activities. This training program is required of new principals in the year prior to their school opening. Principals in the training program spent 2 weeks in Providence shadowing Met leaders and staff and participating in working sessions with grantee staff to help the principals gain a deep understanding of the Big Picture educational philosophy. Principals returned several more times to Providence during the school year: first to experience the start of the school year, then again to see what a family engagement event looks like, and finally at the end of the school year to witness student exhibitions. When the principals returned to their districts, Big Picture staff maintained weekly contact with the new principals via e-mail and telephone to monitor the principals' preparation for the upcoming school year. Principals were also required to submit weekly "TGIF" newsletters, updating grantee staff and the other new principals on their progress toward opening their schools on time. Principals also engaged in online threaded discussions facilitated by grantee staff.

The content of the professional development the grantees offer principals for leading small schools is quite varied. Imparting the grantee's educational vision is a major part of this professional support. In the case of BayCES, for example, the grantee seeks to help school leaders think about their school in terms of the inequities that result from conventional school practices. BayCES coaches seek to help their principals learn how to use data to explore issues of school equity.

Several grantees have particular practices they want their principals to be able to implement. CCE, for example, provides training in how to serve as a "critical friend." Big Picture teaches its principals how to conduct parent engagement events and "morning pick me ups." Big Picture and High Tech provide guidance on how to run internship programs.

Beyond understanding the grantee's educational philosophy, the most commonly cited topics for principal professional development are how to hire the right kind of teachers for these small schools and community and parent engagement. Nuts-and-bolts topics for principal professional development include technology and budgeting and reporting.

Some of the grantees are concerned that they are not providing enough training in the pragmatic side of running a small school.

After reflecting on their first year of offering professional development for principals who would open Big Picture schools the next year, a grantee staff member observed:

> We've done a good job with help with philosophy. We won't know how good until they open their doors. Philosophy has been good, but we need to structure more time for start-up and management issues of the TYBO [the year before opening] year.

Teacher Professional Development

Grantees also provided teacher professional development and coaching services. Eleven of the 12 grantees described offerings in this area, some of which are described in Chapters III and IV. On-site coaching was provided by Aspire, BayCES, CCE, EdVisions, MSSP, and New Visions. Six grantees offered at least some teacher materials online. The forms of teacher professional development that grantees described are shown in Table VI-2.

Like professional development for principals, that for teachers covers understanding the grantee's educational philosophy and learning to implement practices such as advisories, the development of schoolwide learning outcomes, and discussions around student work. Compared with professional development for principals, offerings for teachers were more likely to touch on instructional issues and less likely to deal with nuts-and-bolts school operations (except at EdVisions, where teachers run the school).

Five grantees reported working with teachers on curriculum and instruction, and grantees starting new schools were more likely than those working on conversions to offer professional development on curriculum and instruction. Project-based learning was stressed in professional development by High Tech and New Tech. High Tech, NCLR, and New Tech reported providing coaching on curriculum development.

Curriculum and Instruction Resources

Few of these grantees provide any specific curriculum materials.

Although a number of grantees offer teacher professional development on issues of curriculum and instruction, as described above, by and large they do not provide curriculum materials or instructional resources. Some grantees, such as Big Picture and EdVisions, have a teaching and learning philosophy that calls for building individual students' instructional plans around internships in the community and self-chosen study topics. Since there is no set curriculum, it would make little sense to promote or distribute particular curriculum materials. (EdVisions does use mathematics software with students at Minnesota New Country that has been spread to other EdVisions schools.)

In addition, a fairly large number of the grantees focus on school design issues rather than the content of instruction. In a number of cases, they believe that school design teams, working with a set of principles of effective schools, should select their own curricula.

For some grantees, their historical connections with Ted Sizer and the Coalition of Essential Schools places them in the "habits of mind" end of the philosophical spectrum concerning educational objectives. These grantees are concerned more with imparting thinking skills than with teaching any particular content.

Other grantee organizations are perhaps more agnostic about the debate over curriculum standards versus habits of mind as the basis for what gets taught, but found themselves working with schools or design teams so embroiled in urgent issues regarding facilities, processes, and school culture that there was limited appetite for discussions about curriculum.

Aspire is a case of a grantee without a philosophical objection to providing curriculum resources to its schools. Most of its prior work had been at the elementary school level, however, and when it opened East Palo Alto High School, it had the opportunity to have Stanford University work with the school staff on curriculum and instruction. Aspire reported working with teachers on curriculum and instruction to a much greater extent for the school that would open in Oakland in 2002.

New Tech was the only grantee putting a strong emphasis on developing curriculum materials that schools in their networks could use. Teachers at New Tech's model school are being compensated by the grantee organization for submitting project modules to New Tech's Curriculum Library. New Tech's curriculum specialist designed a Web-based template that provides the teachers in the model school with a common framework and architecture to capture project modules they develop for their classes and to submit them for review. The plan is that teachers at the replication sites will have access to this library of project-based learning modules and eventually will add their own modules to it (and be compensated for their submissions).

High Tech High has a similar emphasis on project-based learning but does not plan to emphasize provision of curriculum units to other schools in its networks. The professed reason for this decision is the strong belief that teachers need to develop their own curriculum tailored to the interests of their students and teachers' own expertise. One project-based learning curriculum unit (on robotics) developed at High Tech High San Diego was in fact offered to the science teacher at their first high school. The latter chose not to use the unit. Rather than trying to give teachers at their network schools units they have developed, High Tech High is working with teachers at High Tech High San Diego to document the process whereby they develop project-based learning materials. It is this process description, rather than the units themselves, that High Tech High plans to disseminate.

INTERVENTION STRENGTH

Porter, Floden, Freeman, Schmidt, and Schwille (1988) have developed a framework for analyzing educational interventions in terms of their "intervention strength." They conceptualize intervention strength as an amalgam of four factors: prescriptiveness, consistency, authority, and power. In a study of mathematics reform projects, they found that those programs rated higher in terms of these aspects of intervention strength were more likely to be implemented. We include intervention strength in our evaluation's conceptual framework, but have modified the Porter et al. framework somewhat to highlight differences among the 12 foundation grantees in this study.

Specificity and Prescriptiveness

Whereas Porter et al. classified programs in terms of a single factor they labeled "prescriptiveness," our conceptual framework makes a distinction between specificity—how concrete and well documented the intervention is—and prescriptiveness—the extent to which the grantee *requires* implementation fidelity. Although it is difficult to be overly prescriptive about a vaguely formulated intervention, it is quite possible to have a fairly specific model but to permit and even encourage modifications of it, and this was in fact the case for several of the 12 grantees.

At this stage in their development, most of the interventions promoted by these grantees are low in terms of specificity.

For each of the grantees, we coded both evidence of the specificity of the grantee's model and evidence that the grantee requires adherence to the model or permits variations. After reviewing these codes, analysts made judgments concerning the specificity and prescriptiveness of each grantee's program. Some of the features that were counted as evidence of specificity were program-specific materials describing how the school should be structured or operated and curriculum and assessment materials in a detailed enough form for use by others. Types of evidence of a lack of specificity included school personnel reports that they wanted more specific materials, grantee statements that they were seeking to replicate design principles rather than specific school features, and a lack of specific operational guides, curriculum, observable model schools, or assessment tools.

Only four of these interventions or models can be considered even moderately specific (Aspire, Big Picture, EdVisions, New Tech). Like most whole-school reforms, the efforts of the 12 grantees in this initiative are much more general, and thus more flexible, than curriculum-specific reforms, such as Success for All, that may feature a detailed body of content and even scripts for teachers' lessons. Like the New American Schools design teams studied by Bodilly (1996), the majority of these grantees eschewed highly specified designs and instead anticipated a process of design evolution in concert with school staff. The replication target concept discussed earlier and shown in Table VI-1 is relevant here. The four grantees whose interventions can be considered moderately specific are those trying to replicate *school designs*. The three grantees asking schools to replicate *design principles*, rather than a school design per se, believe that there are multiple ways in which these abstract qualities could be instantiated in a school's design and operations. They do not insist on a particular instantiation as long as the school's choice upholds the essence of the design principles. The five grantees trying to replicate a *process* across their school design teams expect the school teams to create their own models. In terms of the Porter et al. dimension of specificity, those grantees promoting replication of school designs are characterized by the highest specificity within this group, followed by those promoting design principles and then those promoting replication of a process. An examination of Table VI-1 reveals that grantees pursuing a district-linked strategy are likely to be promoting replication of a design process, and hence to have interventions that are fairly low in terms of specificity.

Another perspective on the specificity of the grantee interventions can be gathered from the principal survey responses. Survey items queried principals concerning the specificity of the help they had received from their grantees in 13 areas, including developing a focused set of goals for student learning, designing pedagogy, establishing a firm financial base for the school, recruiting and retaining teachers, and creating smaller, personalized learning environments. Although a majority of the principals responding to each item felt their grantees had provided at least some general ideas concerning the area of interest, the principals reported receiving *specific* ideas or help actually carrying out ideas less frequently. A majority of principals felt they had received specific guidance or implementation help with respect to just 3 of the 13 areas: establishing a small set of focused learning goals, providing quality professional development for their staff, and creating personalized learning environments.

Several of the grantee staff provided observations showing their awareness of their replication sites' desire for more specific guidance and tools:

> For start-ups, not having information is a liability. . . Sites need resources. People make a commitment to a design, and then they need support about how to do the design.
>
> Schools want a book of how to do all this, but there's still this huge piece of artwork [necessary].

Grantees are trying to figure out the right level of prescriptiveness.

Conditions that were interpreted as evidence of prescriptiveness included a school rubric with elements a school design team needs to commit to in order to work with the grantee ("non-negotiables"), required standardized reports, required operating procedures specified in all their schools' memoranda of understanding, requirements for design team composition, rejection of a school's principal selection, required professional development, and actually cutting off sites deemed not to adhere to the grantee's principles or model. Evidence against prescriptiveness included continued work with a school with a different pedagogical model or curriculum, expressed expectation that their schools will vary, one-time lump-sum funding, and acceptance of schools that do not incorporate all components of the model.

At this stage of the initiative, we have less evidence regarding prescriptiveness than on specificity. Some grantees have yet to face the situation of a school partner's failing to conform with the grantee's model or principles. Where evidence was available, it was often mixed. Aspire, for example, has taken a fairly prescriptive approach with its elementary schools, even specifying the signs that must be posted on the walls. But Aspire permitted a fairly large degree of self-direction in its first high school. Comments of Aspire staff suggest that future Aspire high schools may have less latitude in charting their own course.

Big Picture is seriously concerned that schools in its network adhere to the "purity of the model." The staff expect schools in their network to resemble The Met. Specifically, they say that these schools should have internships, advisories, exhibitions, and parent involvement. Big Picture leaders express ambivalence about the right level of control:

> We don't want to lose control. A complicated model like The Met requires a higher level of control. . . We don't want to be too heavy handed. . . We don't want to be too loose or too tight.

During 2001-02, Big Picture dropped several sites from its replication plans as grantee staff began to anticipate that these sites were not capable or willing to conform to Big Picture's implementation standards. As one of the grantee leaders noted:

> We must accept that we may create some very good small schools, but they [nevertheless] are not Big Picture schools. That's not a matter of [a lack of] success, they just aren't part of our network. People may believe in what they are doing, but that's not what we set out to do.

High Tech High is the other example of a grantee that severed ties with a site that it felt had deviated too far from its model. In this case, the site had in fact opened its school. When the school staff responded to the very low basic skill level of their entering students by instituting a mastery-based basic skills program, High Tech High objected to both the use of "canned" curriculum and the separation of students into homogeneous ability groups that would result from this performance-based approach to course sequencing.

New Tech is an example of a grantee that has tried to be very clear about required elements, but has chosen to make modest compromises in the face of resistance from potential partners. New Tech's Strategic Alliance Agreement requires districts to guarantee schools autonomy over hiring and firing of staff, selection of curriculum, discipline policies, and budgets. The agreement also specifies New Tech's requirements for school size, curriculum, school culture, technology infusion, staff work load, and community buy-in. In addition to implementation of its core design elements, New Tech requires "80% compliance" with this larger set of features ("the 80/20 list") so that replication sites will have the look and feel of New Tech's model school. One modification made between New Tech's first and second requests for proposals is that the 1:1 computer-to-student ratio and the school's location in its own facility, physically detached from other schools, are on the 80/20 list rather than among the absolute requirements.

EdVisions is another case of a grantee with a fairly specific model and accompanying supports that consciously chooses to work with some schools that have not implemented everything in the model. However, EdVisions has delayed provision of funding for sites it felt were not ready to implement a significant portion of the model, as have New Tech and NCLR.

Coherence

Coherence (or "consistency" in the Porter et al. framework) refers to the compatibility of various reform efforts undertaken by a school or of the various components of a single reform effort. Since these schools are just beginning to take form, our evidence concerning coherence is limited at present. Some of the elements working against coherence of the grantees' work with schools were:

- The schools' participation in multiple reform efforts.
- The grantee's receipt of funds from multiple donors with slightly different emphases.
- Partnerships among foundation grantees with somewhat different emphases.
- School staff resistance to aspects of the grantee's model.
- Incompatibility between the model and preexisting programs and school structures (endemic to conversions but found for some schools considered start-ups as well).
- Differences in philosophy and approach between school leaders and grantee organization leaders.

Coherence is enhanced in cases where the grantee and a school's district emphasize the same principles, where partners share model features, and where tools are used in common (e.g., a design architecture for curriculum modules, a system for tracking student accomplishments with respect to schoolwide learning goals).

Unlike specificity and prescriptiveness, coherence cannot be judged without examining the sites where the intervention is being implemented, since it derives to such a great extent from the compatibility between the grantee's intervention model, school staff beliefs, and the political and social context within which the school operates.

School principals view their work with these grantees thus far as compatible with local goals.

All of the school principals responding to these survey questions reported that the components of their grantees' work with the school fit together well, were well aligned with the school's goals and priorities, and were supported by staff professional development. Just one start-up school principal reported a lack of compatibility between their work with their grantee and state and district standards.

Authority and Power

Authority and power are elements in the Porter et al. framework that induce a school to adopt a reform or innovation and stick to it. Authority can come in the form of approval from a highly regarded individual or organization (e.g., "state-approved" or "PTA-recommended") or in the form of the perceived expertise or stature of those promoting the reform. Power involves the provision of resources linked to implementing the reform model or sanctions for failure to comply.

Grantees perceive a number of elements of authority behind their efforts. In one form or another, the most common element of authority for these grantees is the association with well-known researchers and education reformers (cited by four grantees). Many grantees specifically mentioned their model's linkage to Ted Sizer. Three grantees cited visible business and community support as enhancing their stature. Several of the grantees believe that their organizations have established state and national visibility and that their name conveys prestige value. District interest and support was cited as a major element of authority for New Visions' work within the community districts of New York City. Finally, the foundation's name was cited several times as a key to opening doors.

In many cases, grantees have limited leverage over the schools that are expected to implement their models.

Power is important because it enables grantees to enforce their models at the school level. Aspire has a unique position in this regard because it owns the schools with which it works. Thus, Aspire can enforce decisions directly in a way that other grantees cannot.

A grantee's power or leverage with respect to its schools is likely to vary, depending on whether or not it is working through districts and whether or not the funds, relationships, and intellectual resources the grantee provides are viewed as essential by the school partner. In seeking school partners with their own solid funding and political base, grantees may be increasing the odds that their schools will be able to open but reducing their leverage with the schools.

The clearest element of leverage in these efforts is the funds that grantees provide to schools. (See discussion of the amount of funding schools receive above, and Table VI-3.) Several grantees state explicitly that funds are tied to school implementation criteria. In cases where funds are given all at once, however, the grantee loses this leverage once the funds are expended.

Nonmonetary resources in the form of services are additional sources of power for the grantees' interventions. The extent to which grantees' services enhance their power depends on the perceived value of the services. (See the discussion of principals' views of the importance of grantee-provided supports in Chapters III and IV.) Some of the grantees believe they can exert more control over their schools if their support for schools comes in the form of services rather than cash. Big Picture pays for half of the salary of principals the year before their schools open and provides professional development and materials rather than cash. A Big Picture leader explains:

> I cringe over giving money that is open to how it is used. We want people to follow the design. Professional development must be around the design.

Although this approach ensures that the funds are used to promote the grantee's model, it does rely on the schools' intrinsic motivation to implement the model.

Given that a typical school will receive only a small portion of its start-up or conversion costs from the grantee (for example, just 9% in the case of one school in our sample) and that the school must have its own source of funding for ongoing operations, several of the grantees have expressed the sentiment that they have little leverage over "their" schools.

Grantees' influence over their school partners may have been particularly weak in the first set of schools that opened with support from the National School District and Network Grants Program. Given the timing of their own funding, grantees generally had to work with small-school efforts that were already under way to enable a fall 2001 school opening. The next wave of schools working with these grantees may prove to be in greater need of the grantees' assistance.

STRATEGIES FOR SCALING UP

When the Bill & Melinda Gates Foundation launched the National School District and Network Grants Program, the hope was that foundation funding would launch intermediary organizations' efforts to create small schools and build capacity to a point where those organizations could become self-supporting by scaling up their efforts and receiving fees for their services or products. Thus, efforts to scale their work beyond an initial 9 to 10 high schools to orders of magnitude more and efforts to provide a sound financial basis for the organization were linked. We deal with grantees' plans regarding scalability in this section and discuss the grantee organizations' financial viability later (in the section on organizational capacity).

A number of the grantees have aspirations for launching many more schools than those for which they received their initial foundation funding. (Several, including BayCES, CCE, and NCLR, were already working with large numbers of schools before receiving their foundation grant.) Big Picture, EdVisions, High Tech High, New Tech, and New Visions discussed plans for scaling up during the spring 2002 site visits. With an eye toward scaling up, Big Picture staff put considerable effort into developing more systematic management practices during 2001-02. They also reworked their business plan into a form designed to attract investor funding. They worked on writing up their processes and making school design and process materials available on the Web. They developed the concept of clusters of Big Picture schools in a given region, which could act as a "mini system" in a network of networks (an idea they share with New Tech, both organizations having been advised by Ted Fujimoto). Big Picture also initiated efforts to develop a national board, compiled research findings on the issue of scalability, and held a conference on this topic.

New Tech aspires to having a network of regional New Tech networks, each along the lines of the 10 schools it will be starting in Northern California. Like Big Picture, it assumes that the schools within a regional network will be able to provide mentoring and support for each other. It has been seeking foundation funding to begin this work.

High Tech High has similar goals for expanding its network nationally and internationally. In the spring of 2002, however, High Tech High staff expressed the opinion that their first priority is to stabilize the implementation and then write up processes in a form other schools can use.

All three of these organizations, and EdVisions, spoke about having a wider influence beyond the schools that are official members of their networks. They receive many inquiries and visits from interested parties from around the world. Some groups will not seek an official tie with the grantee organization and may not implement all of its principles or processes but nevertheless may appropriate those aspects of the reform that they believe will serve their ends. High Tech High, for example, has worked with the group planning a technology-oriented school in the Denver area. Although this CCC-sponsored school will not be a part of the High Tech High network, it will include a number of features adopted and adapted from the High Tech High model.

In contrast to these grantees' thinking in terms of national networks, New Visions has a much more place-based saturation strategy for scaling up its work. It proposed to reach 35 to 60 high schools with its initial grant, but by spring 2002 it expected additional funding that would enable it to start more than 100 schools. Beyond that, it hopes to see small secondary schools become institutionalized as a policy in the community districts of New York City.

Another aspect of the grantees' thinking on scaling is the notion that strategic partnerships can help them leverage their efforts and get to more schools. Many grantees have been actively forming partnerships to help leverage their efforts (discussed below in the section on grantee capacity).

SUSTAINING THE SCHOOLS' REFORMS

One can think of the American education system as a jigsaw puzzle with many interlocking pieces. It is difficult to force a truly unconventional school into this puzzle because it will not fit neatly into the space creating by funding formulas, accountability systems, and hiring practices. Extraordinary effort (and outside funding) can create these nonstandard pieces and force them into the puzzle for a while, but skeptics argue that when the outside funding and support diminish or disappear, the conventional puzzle pieces will exert pressure on the unconventional school to conform (David, 1994). What will preserve the character of the high schools started or converted with foundation funds after the grant period expires?

Grantees offer a number of different perspectives on this issue. The single most frequently cited strategy is institutionalization of new ways of thinking about and supporting small schools within district offices. BayCES, CCE, CSC, MSSP, and New Visions are emphasizing this strategy in their work.

Several grantees stress that they are supplementing this district strategy with efforts to build community support that would survive any drastic changes in district leadership or support levels. BayCES, CSC, MSSP, and New Visions are among the grantees banking on community support.

Another strategy cited by CSC is establishing a very broad base of support within its schools. CSC believes that if it can inspire a deep enough commitment on the part of enough staff, the staff themselves will sustain the reform, even if there is leadership turnover.

Finally, grantees also think about sustaining the schools in a financial sense. Aspire, for example, has developed a model school business plan showing that schools of 400 students can be sustained on their state allotment based on ADA, "barring a fiscal crisis in California."

GRANTEE CAPACITY

In the context of the National School District and Network Grants initiative, "capacity" is the human, social, and material resources that the grantee organizations bring to their work supporting small, effective schools. The capacity an organization needs to meet its goals under the initiative will depend, of course, on the number of schools and jurisdictions it is trying to work with and the intensity of involvement needed to implement its model. Those grantees working with a large number of schools or working with schools in multiple districts at great distances can expect to face particularly great challenges to their capacity.

Some of the organizations receiving these grants were new (e.g., New Tech). Others had been in existence, but operating on a smaller scale (e.g., BayCES) or performing somewhat different kinds of work (e.g., Colorado Children's Campaign). Table VI-4 summarizes information that grantees provided about various aspects of their organizational capacity and experience gained prior to being funded under the National School District and Network Grants Program. As one would expect, capacity building to support their activities under the foundation initiative has been a major effort for grantee organizations during the first 2 years of their grants.

Human Capacity

The particular individuals in an organization and the skills, knowledge, and experience they bring to their jobs constitute the organization's "human capacity." Many of these organizations were in the process of identifying roles that needed to be filled and recruiting individuals to fill those roles well into 2002. At least four grantees hired individuals for key leadership roles after the grant was awarded.

Several grantees cited the problem of not having enough school coaches and not being able to find enough qualified individuals with small-school experience. A related concern was difficulty identifying such individuals who were also from the same ethnic backgrounds as the students who would be attending the grantee's schools. CCE expressed concern that its staff lacked experience in converting large high schools into small ones. A number of the grantees had more experience working with elementary schools than with high schools. New Tech said that it did not have (and could not afford to hire) enough curriculum development experts. Big Picture noted that it did not have anyone in distant cities who could spend the time networking, identifying, and recruiting potential principals for Big Picture schools.

In addition to the need for more staff and staff with different expertise, experience, and backgrounds, grantees were fairly frequently beset with turnover among key staff members. By spring of 2002, three of the grantees had had turnover of their top leaders, and two others had lost at least one key staff member.

Social Capacity

One of the ways in which organizations leverage the efforts of their individual staff members is through social networks and norms for trustworthiness that arise within them (Cohen & Prusak, 2001). At the grantee level, social capacity consists of the active connections among grantee staff and education thinkers and leaders, as well as the trust, mutual understanding, and shared values that make cooperative action possible. Social capacity enables an organization to accomplish more than would be expected on the basis of a simple staff head count. The grantee organizations as a group are well connected within the national education reform community. As stated above, many of them have ties to Ted Sizer and the Coalition of Essential Schools.

Another way in which those grantee organizations with model schools extend their reach is through using the staff from the model school to perform functions, such as documenting processes, coaching staff at start-up schools, and hosting visits from individuals or groups interested in starting a small school. Eventually, according to several grantees, staff at their new schools will similarly be able to support other network members.

We are finding that some of the first schools are gaining some of the expertise and wisdom, and they can do some of the [technical assistance for] brand new sites. These grantees are actively partnering with each other and with other organizations, both in starting schools and for other activities.

Six of these 12 grantees have extended their reach through partnering with each other. Aspire and High Tech High are co-starting a school in Oakland, as are Big Picture and BayCES. High Tech High and Aspire are also planning to partner on a school in San Carlos, California. Aspire also partnered with one of the foundation technical assistance grantees (Stanford University) to start its first high school. Aspire and High Tech High are collaborating in a proposal for an alternative teacher professional development program to be based at High Tech High San Diego. CSC and KnowledgeWorks (the fiscal agent for MSSP and recipient of a more recent Bill & Melinda Gates Foundation grant) have partnered to support small-schools work in Ohio. CSC and EdVisions have collaborated on conferences and have a joint grant from the National Bank Association. EdVisions is under contract to CSC to provide professional development for several of its schools.

Other types of institutions with which the grantees are partnering include districts (discussed above), universities, state education agencies, and businesses. Grantees are also seeking other nonprofit organizations as partners in starting schools. High Tech High is planning to start a school in New Bedford with EDC, a Massachusetts-based curriculum development and research organization. Several of the grantees are talking to Envision Schools, an organization based in Marin County, California, about possible collaborations on new schools.

In addition to starting schools together, grantees have established partnerships for the purposes of developing curriculum and instructional approaches, offering professional development and teacher training, obtaining research and evaluation service, developing technology-based material, securing fundraising assistance, and business planning.

Table VI-4
Elements of Organizational Capacity

	Aspire	BayCES	Big Picture	CCE	CSC	CCC	EdVisions	High Tech	MSSP	NCLR	New Tech	New Visions
Year established	1998	1991*	1995	1994	~1990	1992	1993	2001	2000	1968	1999	1989
Prior experience coaching schools	■	■		■	■	■	■			■		■
Prior experience starting schools	■	■	■		■		■	■		■	■	■
Prior experience starting small high schools		■	■		■		■	■			■	■
Prior experience coaching large high schools that are converting		■										
Strong connections to national reform networks		■	■	■	■		■	■		■		■
Other financial resources	■	■	■		■	■		■		■		■

Source: Proposals to Bill & Melinda Gates Foundation and interviews with grantee staff.

* BayCES was founded in 1991 and incorporated in 1996.

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Elements of Organizational Capacity

	Aspire	BayCES	Big Picture	CCE	CSC	CCC	EdVisions	High Tech	MSSP	NCLR	New Tech	New Visions
Year established	1998	1991*	1995	1994	~1990	1992	1993	2001	2000	1968	1999	1989
Prior experience coaching schools	■	■		■	■	■	■			■		■
Prior experience starting schools	■	■	■		■		■	■		■	■	■
Prior experience starting small high schools		■	■		■		■	■			■	■
Prior experience coaching large high schools that are converting		■										
Strong connections to national reform networks		■	■	■	■		■	■		■		■
Other financial resources	■	■	■		■	■		■		■		■

Source: Proposals to Bill & Melinda Gates Foundation and interviews with grantee staff.

* BayCES was founded in 1991 and incorporated in 1996.

Grantees are developing mechanisms for monitoring the quality of their schools and learning from experience.

Another aspect of the grantees' social capacity is their mechanisms for keeping informed about and shaping the work of their schools and partners working to design new schools. It is one thing to dispense funds to groups wanting to create small schools; it's quite another to ensure that the funds stimulate the intended activities. Some grantees require their schools to submit standard data reports on a regular basis. Use of an outside evaluator for their grant programs is fairly common. Aspire, Big Picture, EdVisions, and New Tech are all working with external researchers to plan a longitudinal study of their graduates.

Another important way many grantees gather information is through the coaches they send out to work with the schools or design teams (e.g., BayCES, CCE). Those grantees that are located in close proximity to their schools are particularly likely to rely on such informal mechanisms, which can be effective given frequent contact.

Some of the grantees have implemented quite interesting ways of keeping in touch with their schools and encouraging reflection and improvement. BayCES, CCE, and New Visions, for example, use "critical-friends coaching." New Tech conducts focus groups with students at its model school to get insights into needed improvements. CCE plans to conduct its own case study of one of its schools in 2002-03. Big Picture believes that holding meetings on critical topics (such as scaling up) is a useful way to increase the organization's knowledge base. Big Picture also maintains a database of issues arising from its weekly phone conferences with its school leaders and coaches. Big Picture described its new Providence schools as "R&D centers," where new ideas can be tried out and watched closely.

Grantees' ability to assure that their schools maintain quality and adhere to the grantee model may be limited.

A New Visions leader described uncertainty concerning grantee staff roles with respect to school teams and the tentativeness of their school coaches' early efforts to influence practice at their schools:

> We really did not know what it meant to be a liaison. [They saw us as] . . . nice people; if they needed something, we helped them. [Our] people did not feel like they could interfere.

Similarly, an MSSP staff member noted, "We are guides to these schools; we have no authority over them."

Although Big Picture's contacts with new-school leaders and involvement with new schools in its network appear to be among the strongest in this group, the organization is concerned about its ability to ensure quality in its replicates. Big Picture leaders recognize the fact that they cannot have the same understanding of the students and the local environment that they do in their Providence model school:

> We will not be able to control quality from the central office. You hire good people, with high standards, and depend on those folks, on good principals. I can't go into a place I don't know and say 'I don't think your students are doing challenging work.' I don't know those kids.

The issue of quality assurance relates to that of power, discussed above, in the minds of Big Picture leaders. They recognize that they will depend on remote school leaders to implement their network and that they can push those individuals only so far:

> At first, it [quality assurance] will be pretty informal. It's a fragile situation when you're so totally dependent on relationships [to get effective schools in place]. We put in a lot of time to develop relationships with sites. We won't pull the plug on the relationship as quickly as we would if the site hadn't started up yet.

Financial and Material Capacity

Of the 12 grantees in this study, 5 described significant external funding from sources other than the foundation. (Evidence of other funding sources for three additional grantees was found within grantee documents or Web sites.) Other foundations and government agencies are important funding sources for these organizations, as are private donations and support from business partners. At least one grantee organization had no other source of funding at the time of the 2002 site visit. Those organizations with longer histories and those with nationally known leaders generally appear to have more success in attracting external funding sources in addition to their foundation grant.

Grantees are concerned about the financial sustainability of their organizations.

Several years of experience working with grantee organizations supporting small secondary schools has convinced the foundation executive director for education that the initial hope that the grantee organizations could become self-sustaining within 5 years was "probably naïve." Grantees are exploring essentially two paths for sustaining themselves as organizations.

The first of these is the continued pursuit of private and government grants to support their work. Those grantees that have received such funding in the past are continuing to pursue it, as is New Tech. Several grantees reported a chilling of the climate around school philanthropy as a threat to this strategy, however.

> Along with the economic downturn went the national optimism that every community would need or desire a school like NTH and could afford it. Corporate dollars for these types of things are scarce.

The second strategy, being actively explored by Big Picture, EdVisions, High Tech High, and New Tech, is turning their expertise in designing and running small, student-centered model high schools into intellectual property (IP) and fee-for-service activities. These organizations have put considerable effort into documenting their principles and processes, both for use by the schools they will be starting under their foundation grants and with the hope that a broader set of schools may choose to purchase materials or services. EdVisions, for example, is considering undertaking school start-up activities for interested groups for a fee of $30,000 to $50,000, which they say is about what such groups typically pay consultants now. As one EdVisions leader puts it, "We have no fear of turning this into a business."

The large unknown is whether enough schools will be willing to pay enough for these materials or services to provide a significant revenue stream. None of the grantees has generated significant income in this way yet. Although a number of organizations have invested considerable time and money in the effort to create intellectual property that will generate future revenue, EdVisions was the only grantee that expressed much confidence in the enterprise. Moreover, some of the grantees are concerned that withholding their materials from those who do not choose to pay in effect goes against their deeper mission of having a major impact on American education. As one grantee staff member said:

> We need a revenue stream so that we are not dependent on grant money. . . We are trying to figure out if we can make money on our materials and be true to what we believe in.

One of the foundation technical assistance grantee leaders voiced vehement objection to packaging reform ideas as IP:

> The notion that this is all about products and selling products, and knowledge becomes a product, and kids become a product and schools becomes a product, is really undermining the kind of work that aims to teach all kids well, to really meet the needs of all students; it's a hidden conflict in this movement.

IMPLEMENTATION CHALLENGES

Grantee staff were asked to describe the biggest implementation challenges from their standpoint.

Defining Models and Processes

A large portion of the grantees' time during these early years has been consumed in trying to articulate their model or design principles more explicitly and in trying to develop a set of processes and procedures for working with potential partners and with the schools they help start or convert. These organizations in many cases are entering uncharted territory, fraught with competing needs and values as well as political sensitivities.

A silver lining in this effort, observed by the principal of New Tech's model school, is that the effort to articulate design principles and practices itself leads to reflection, refinement, and greater shared understanding within the model school. He notes that this process puts every project and policy, as well as people's roles in the school, under intense scrutiny. The school also refined its hiring practices as a direct result of its involvement in documentation for the replication effort:

> Our interview and hiring processes have changed greatly due to the replication project. We have instituted a new talent search process and professional development program to ensure that we maintain quality staff within the system. Prior to this, we were pretty traditional in our hiring practices. We have elevated our talent here by attracting good people and then developing them.

Some grantee staff have expressed frustration that every school staff seems to want to "reinvent the wheel." There appears to be a reluctance to accept externally developed processes and procedures, even for those aspects of a school that do not touch on teaching and learning.

> I see a real backlash against replicating or repeating things that other schools have done. . . We [Aspire] just had a meeting to talk about ordering procedures for standard supplies, and now we can use that procedure every year. Of course, the principal can adapt them then, but should they rethink it every year? There are so many efficiencies that are rooted in such

> practice. I mean, we're not talking about best practice. . .With educators, the word 'model' or 'replication' has bad connotations.

Finding the Right People

As described above, many of the grantee organizations did not have the staff they needed to carry out the ambitious programs outlined in their grant proposals. The grant award brought a new mandate, and with it the need to have both the leadership and the school liaison staff to define and run the proposed program. At the same time they were trying to build their own staff capacity, these grantees needed to make sure that their schools would have the kinds of teachers and leaders they need to be successful. Staff with small-school experience, "the right gut," and appropriate ethnic and cultural backgrounds were in short supply at the time these grantees were attempting to gear up. Moreover, grantees, especially those working with distant sites, had limited opportunities to recruit candidates and influence selection of staff for their schools. A New Tech staff member, for example, expressed concern that, rather than instituting a rigorous selection process and hiring teachers from outside the district as the model school had, their future replicates were engaged in within-district hiring.

Imparting an Instructional Vision

Several grantees noted their difficulty in imparting the vision of instruction they wanted to promote to the school teams with which they were working. In part, this difficulty appeared to be a function of the fact that there were so many urgent issues concerning facilities, funding, and creating a positive school climate that appeared to push questions of teaching and learning to the back burner. Another source of difficulty in several cases appeared to be a difference in experience and philosophy between members of the grantee organization and school staff. A grantee staff member observed:

> I feel close to that [school] staff, and we have made a number of decisions along the way, but we are not necessarily committed to the same pedagogical and curricular approach.

Similarly, one of the other funders of New Visions' New Century High Schools initiative noted differences between the grantee and school staff in terms of instructional philosophy:

> [The] vision for rigorous instruction is quite different. . . The Coalition of Essential Schools vision is shared by Jill and Bob [grantee leaders]. In the schools . . . [there is] far more traditional [philosophy] than that. What has been emphasized in the school is a core mission . . . They are just starting to emphasize literacy.

Developing a Viable Business Model

The evaluation team heard repeated laments that the foundation grants were insufficient for the small-schools work the grantee organizations sought to accomplish. As described above, many of the organizations are grappling with the development of a viable economic model, both for their own organization and for the schools they are helping to launch. Although a number of grantees have been actively thinking about ways to develop and market intellectual property and fee-for-service businesses, most express reservations about the viability of this strategy. They are concerned (and rightly so) about the size of the market for their materials and about the willingness of schools and groups interested in starting schools to pay enough to support needed development costs.

Beyond the need to find an economic model for their own organization is the need to develop one for their schools. When school funding is based on head count, small schools will have small budgets. The gap between ADA funding and what a school needs to operate is especially large for technology intensive school designs. Moreover, those grantees operating model schools are accustomed to having the human and social resources of the school and the umbrella organization (e.g., the Big Picture Company and The Met) reinforce each other. They are concerned that this mutually beneficial arrangement will not be extensible to their replication sites.

Doing Everything at Once

Finally, it should be remembered that we are examining these organizations early in their work to help start or convert schools. Previous studies of education reform efforts (Bodilly, 1996) lead us to expect a great deal of turbulence, surprises, and some dead ends in the first 2 or 3 years of such efforts. As one grantee staff member put it:

> You can't open a school, be the carrier of the vision, be the instructional leader, obtain funding for the school. This is too much, and many times it just cannot be all in one person.

A leader from another grantee organization cites a similar concern, "It would be nice if all these schools had training wheels; [but] they are on a two-wheeler."

BIGGEST ACCOMPLISHMENTS

When grantee staff were asked to list their major accomplishments in the spring of 2002, they pointed primarily to procedures they had codified products they had created for use by new schools and others, and, of course, schools they had opened and school teams they were supporting.

Processes Put in Place

Grantees worked during their first year to identify and formalize the process they would use to recruit potential schools or school design teams and decide which ones to support. Effort went into articulating the kinds of support the grantee would offer and the resources, autonomies, and school features they would require of their partners. A number of the grantees formalized these criteria in a structured RFP process. They developed rubrics for evaluating proposals from potential sites and candidate orientation materials and activities. Candidates developed agreement forms and processes. For example, New Tech developed a formal Strategic Alliance Agreement. BayCES developed a facilities task force to work with the Oakland district on a facilities memorandum of understanding. Planning aids that the grantees developed during the first 2 years include a high school opening timeline and the specification of projected start-up and operational costs for their models.

Products

Grantees also developed products that their schools or school design teams could use. Those grantees with a model school had a leg up on providing specific materials that others could use. Big Picture, EdVisions, High Tech High, and New Tech all developed materials describing school activities and features that could be accessed on CD-ROM or the Web. These included components such as an instructional guide for developing digital portfolios, resource materials for internships, descriptions of how to run advisories, and templates for developing project-based learning modules. Big Picture also developed 20 workshops on the Big Picture model that its principals-to-be could implement with their own school staff.

Other grantees developed products for design teams. CCE, for example, developed a planning manual for school conversion and a Small School Guide with benchmarks a converting school could use to gauge its progress. New Visions created a video for planning teams, illustrating the inclusion of students in the planning process. BayCES developed a formal curriculum for the coaches it sends to work with school teams.

School Openings and Conversions by Fall 2001

The organizations in this study received their foundation grants at different dates, some as late as the spring of 2001. Given the amount of work required to select a school site and plan and open a new school or convert an existing one, it is impressive that 9 grantees were able to have 27 small schools (either start-up schools or learning communities created by converting a large school) in operation by the fall of 2001. These openings are shown in the bottom row of Table VI-1. The student and teacher survey data (reported in Chapter V) suggest that this accomplishment is more than just "meeting the numbers." Even in their first year, the new small schools exhibited more positive climates than large schools awaiting conversion in terms of high expectations for all students, personalization, and students' sense of safety and orderliness.

School Openings and Conversions in Progress

The number of small schools started through this initiative is likely to grow dramatically over the next 2 years, as suggested by the number of schools actively working with these grantees toward school openings or conversions in fall 2002 or beyond. Grantees cited 108 schools with which their work was in progress as of spring 2002. In most cases, projected dates have been determined, but delays are not uncommon (site visitors were informed of six of these during the spring 2002 interviews).

Indirect and Broader Influences

Finally, there are signs that these grantees are beginning to have an influence beyond the set of schools with which they work directly. It is common for groups to discuss school design features with the grantees and perhaps even to enter negotiations or a formal design process or to start training without necessarily becoming a member of the grantee's network. Nevertheless, many of these schools take ideas away from these experiences with the grantee.

Many more schools are attending the grantees' conferences and reading their materials; contingents from Australia and Ireland have come to tour model schools and learn about the models. State legislators have asked for guidance in framing support for schools with some of these features (e.g., technology high schools in California). Although it is still early in the unfolding of this initiative and of the new schools it will create, early indications are that these grantees will have an influence beyond the schools they are supporting with grant funds.

CHAPTER VII

EARLY FINDINGS AND IMPLICATIONS

A number of reform efforts have sought to enhance student learning and persistence in school by reducing the sense of anonymity and disengagement that many students experience in large, comprehensive high schools. These efforts have taken multiple forms (e.g., internal "houses" or "families" of students and teachers who stay together for multiple years, "academies" or "schools-within-a-school" that provide a distinctive focus and smaller peer group, reductions in class size). More recently, public school systems in Chicago, New York City, and elsewhere have experimented with converting existing large schools into smaller, autonomous schools and creating new small high schools. The charter school movement has extended to secondary education and produced small high schools across the country. The common purpose of these reforms is to provide students with an environment that is both more personalized and educationally more effective, addressing students' individual needs and learning styles.

Although public and empirical support is mounting for small, effective learning environments, small schools are far from commonly available as an educational alternative for all students (e.g., Learning First Alliance, 2001). Such schools are currently in short supply, as is knowledge of what it takes to achieve systemic success. The National School District and Network Grants Program is intended to address both of these shortfalls. As illustrated throughout this report, the Bill & Melinda Gates Foundation has contributed significant resources to increasing the number of small, effective high schools and to supporting research that examines the process and outcomes of these reform efforts.

As a description of the earliest stages of efforts by the foundation, grantees, and schools to transform American high schools, this report is the first chapter of a longer, evolving story of reform. We conclude this part of the story in this chapter by:

- Summarizing what we have learned about the change process during the schools' first year of reform activities.
- Discussing the schools' progress toward implementing the foundation's attributes of effective schools and classrooms.
- Describing the experience of students in these new small schools.
- Drawing implications of these findings for the foundation, its grantees, and schools.

THE CHANGE PROCESS

Getting Started

Schools included in this evaluation study were each affiliated with a grantee funded through the National School District and Network Grants Program. But the start-up process or conversion planning for these schools was not necessarily instigated by the grantees. In many cases, the process was well under way when the affiliation between the school or school design team and the grantee was established. In a few cases, the affiliation between the grantee and the school appears to have been formed in haste; indeed, several of the schools we studied are no longer working with a foundation grantee. (One relationship was severed; one school did not reopen in the fall of 2002; and grantees described their relationships with two other schools in the sample as ending or probably ending.) In future years of the initiative, it is possible that more of the schools being started or embarking on conversion planning will have gone through a more protracted courtship. Our findings concerning planning and start-up processes for small schools need to be read with the caveat that in later years of the initiative, longer periods for planning with the grantee prior to school opening may reduce some of the difficulties encountered by this first set of schools.

Start-up or Conversion

From the grantee perspective, there are multiple starting points and strategies for working with schools. The choice to create small, effective schools by starting new ones, as opposed to converting existing large high schools, has many ramifications. Converting existing high schools, for example, necessarily entails a close working relationship with the district within which the school is located. Working within a traditional system, grantees and school design teams need to negotiate small-school design features with district officials, school boards, and unions. Moreover, the expectation in most cases is that the small schools resulting from the conversion will employ most or all of the teachers of the existing school and serve students from the same neighborhoods, at least in the early years after conversion. In contrast, the grantees starting new small schools can often maintain considerable separation from district policies and procedures by establishing the school as a charter school. Start-up schools usually have the freedom to recruit staff and students who are attracted to their mission. As a result, start-up school teachers feel a greater sense of autonomy and feel less beleaguered by decisions made by entities outside their school.

Another key difference is the reform initiative's impact on teachers. Teachers in large schools planning conversions often believe the impetus for this activity came from outside the school. There is a perception among many of them that their school's conversion is a top-down reform requirement. Moreover, for school conversions, the planning activities themselves can be divisive for school staff. It is difficult to establish planning groups of a workable size within a large school faculty without creating a sense of "in" and "out" groups. Teachers, especially those not deeply involved in planning, worry about the impact that the conversion will have on their job, their role, and even their classroom facility. Although some teachers working in large schools that are converting are strongly motivated to find a way to improve the schools and look forward to smaller learning communities, others are cynical about what they perceive as the latest reform fad. This division in staff support stands in contrast to the situation in new small schools, where staff typically came to the school because of their interest in its mission.

Change Models

In Chapter I, we characterized the approach that grantees bring to the schools they work with as a school design, design principles, or a design process. In cases where a grantee is working closely with a district, there may be advantages to having a more open-ended approach (i.e., a design process or design principles rather than a specific school design) in terms of promoting teacher understanding and buy-in. Extending the argument that people learn best when they take in new ideas and combine them with what they already know to produce new levels of understanding, some grantees believe that school staff need to go through a process of discussing the effective school and classroom attributes and designing school structures to support those attributes in their own context. The process of adaptation is seen as central both to creating teacher buy-in and to creating a school that really works in the particular context and with the specific students at hand.

The alternative thinking concerning replication is that, given the presence of a small model high school that has demonstrated effectiveness for students (particularly for those who typically do not thrive in a conventional school), grantees should seek to create new schools with the same essential features as the model. Grantees trying to replicate specific school design features can provide their school partners with more concrete materials and direction than can those taking a design process approach. In addition, because these grantees are creating new schools rather than converting existing schools, they are able to recruit school staff and students who are attracted to the design embodied in their model school. Although there is still a process of helping staff, students, and parents to understand the nature of the model and its implications and to make adaptations to fit local circumstances and students, these grantees are more often "preaching to the choir" rather than trying to convert the skeptical.

Those grantees providing schools with assistance in developing school designs around a set of design principles seek a middle ground, expecting their individual schools to go through a process of deciding how to instantiate the effective-school principles and yet to end up developing similar structures and, indeed, share ideas and strategies with each other (Majone, 1984).

These different change models are associated with differences in the specificity of the intervention the grantees are trying to promote. More specific interventions are characterized by more concrete tools and materials. Grantees involved in replicating a specific school design were more likely to provide their schools with relatively specific academic structures and instructional materials (typically derived from the grantee's model school). Grantees trying to promulgate a design process were more likely to be specific about design activities than about the academic structures or curriculum and instruction that would comprise the resulting design.

Building Up and Making Do

In Chapter II, we discussed the importance of building capital (human, social, and material) to facilitate an organization's capacity to undergo major change. For the purposes of this discussion, we organize our findings by six simple dimensions of capital: time, facilities, teachers, students, money, and support.

Time

Time was identified as one of the most critical resources for significant change and one that was in short supply for start-ups and converting schools alike. For start-ups in the 2001-02 study, the timetable for planning and developing a new school was very aggressive. Often, the individuals involved with creating this first set of small schools spent 6 months or less in planning and development prior to school opening. The logistical and substantive demands of developing a new school can be staggering and involve literally hundreds of details. For the start-up schools we visited, the compressed timeline often led to plans and actions that were developed without important information. For example, planning teams often began designing the school before they could recruit students; thus, designs were developed without information about the number and types of students who would be enrolled in the school. In some cases, recruitment of students had to begin before the charter was approved, a facility obtained, or the design finalized. It is difficult to convince students and parents to attend a school that may or may not exist in the fall and that has yet to be fully designed. Once the school year began, start-up school staff found themselves wearing multiple hats (e.g., coach, mentor, curriculum developer, etc.) at the same time as they were trying to learn about and apply the school design, as well as help refine it to better meet the needs of the students.

Similarly, time was in short supply for staff working in schools undertaking conversion planning. School conversions appear to be requiring at least 2 years of planning activity. Even then, design teams expect to still be resolving many details of their designs during the first year after conversion. It is important to note that during the year devoted to planning, staff in schools preparing for conversion were responsible for running a school of as many as 2,000 students, with individual teachers trying to meet the needs of 150 or so students. Some of these schools had very limited funds to support teacher participation in planning during the work day (for example, $15,000 in one case), with resulting limits on collaborative planning time. To the extent that teachers did engage in the planning process, their roles in these converting schools were beginning to expand in ways similar to those of teachers in the start-ups—teachers in schools planning conversions were called on to act as coaches, mentors, transition team members, curriculum developers, and so on. While staff in start-up schools may have been struggling to identify and address all of the decisions that need to be made to create a new school, change leaders in the large high schools were facing the challenges of how to enact wholesale change in a conventional high school model that is deeply entrenched in the American education system. All of these activities require a great deal of time and energy.

Facilities

The challenge of adequate school facilities was cited by both start-ups and schools undertaking conversion. Finding and financing a new building was difficult, and new small schools often faced a choice between postponing their opening or conducting operations in inadequate facilities. Sometimes, start-ups were housed in temporary facilities (e.g., in commercial buildings) that were not designed for educational purposes and lacked basic facilities such as a cafeteria or gymnasium. Schools undergoing the conversion process did have buildings, but those buildings generally were not designed to foster autonomous, small learning communities. In many cases, the converting schools lacked the money for either a new building or for a significant overhaul of the current one. Some design team members expressed concern that both instruction and school culture in the small learning communities would be constrained by their physical facility.

Teachers

One of the critical features of school capital is the knowledge and skills of the teachers who work there. Measuring teacher quality is both controversial and difficult, and was not a focus of this year's evaluation activities. However, we do know that teachers in the start-up schools reported feeling more prepared for certain aspects of teaching (i.e., implementing new teaching methods, teaching to state or district curriculum and standards, integrating technology into instruction, and conducting student performance assessments) than did teachers in the schools undertaking conversion. We also learned that teachers in the start-up schools had fewer years of teaching experience (averaging less than 8 years) than did teachers in the conversion schools (with an average of nearly 16 years). However, beyond the first 2 years of teaching, years of teaching experience per se do not appear to be a useful indicator of teacher quality (Rivkin, Hanushek, & Kain, 2002; Wilson, Floden, & Ferrini-Mundy, 2001) or of proficiency with the project-based pedagogies being emphasized in the new schools. Although more experienced teachers may have better classroom management skills, they may be less likely to embrace large-scale reform or the project-based pedagogies being emphasized in small schools—they have seen many reforms fail and may be less motivated to commit to another reform strategy. Still, at 25%, the proportion of teachers in their first 2 years of teaching was twice as high in the start-up schools as in the schools planning conversions.

Unlike existing schools, start-ups were in the position of having to recruit teachers. This was both an advantage (i.e., they could select teachers who believed in the mission of the start-up) and a disadvantage (i.e., they had to devote time and money to recruiting staff). In future years, the evaluation will be able to look also at staff turnover in the start-up and converted schools. Several of the model schools run by some of these grantees experienced high teacher turnover in their first year or two. Of course, staff turnover can be viewed as positive (teachers who don't believe in the mission leave) as well as negative (good teachers may be burning out because of the demands placed on them).

Students

Generally speaking, the schools in the study sample included the disadvantaged student populations of particular interest for the foundation—although there is considerable variation in student demographics across schools and school types (models, start-ups, preconversions). Beyond student demographics, one theme that emerged across school types is the difficulty of implementing the envisioned instructional strategies with the skills and behaviors that many students bring to high school. Many students enter high school unprepared for the high degree of responsibility required of them in programs of student-directed learning and without the planning, collaboration, and research skills they need to succeed in independent projects. Start-up school staff found themselves having to regroup and design transition experiences to prepare their students for more independent work. Orderly behavior was an additional prerequisite for the kind of instruction these schools want to emphasize, and something school staff found to require considerable energy to promote.

Teachers in some start-ups seemed surprised by the characteristics of their student bodies and had to regroup quickly. One would expect that teachers in the preconversion schools have a better sense of their student populations, and thus will be able to plan instructional approaches for their new small learning communities with a clearer understanding of what their students will bring to the classroom. However, their survey responses suggest that these teachers may be less familiar with the requirements of project-based learning and active inquiry. Moreover, survey data suggest that a larger proportion of teachers in converting schools hold low expectations for students, perhaps inhibiting their ability to think creatively about new, academically rigorous instructional approaches. Future data collections will reveal whether or not teachers in conversions experience the same surprise and concern about the degree of support required to help their students learn how to learn in classrooms focused on inquiry that teachers in the first-year start-up schools reported.

Money

Although none of the school personnel at any of the schools indicated that they were flush with funds to reform their schools, funding was a particular concern for start-ups. First, they had to find and fund facilities. Second, start-up schools had many funding unknowns. As indicated above, they had to recruit students and often didn't know what their enrollments would be much in advance of the school opening—as a result, there were uncertainties concerning their ADA (enrollment-based) funding. Also, because they are designed to be small, these schools had to figure out how to operate on significantly smaller budgets than do most high schools. Even small schools may need specialized teachers, such as English-as-a-second-language or special education teachers, both particularly important for the student populations the schools were serving. Although they did not face all of these issues, conversion schools felt strapped for funds to support their planning process and the facility renovations needed to support separate small schools sharing the same campus.

Support

Schools reported receiving a number of supports from their grantees. Chief among them were funding and professional development. Principals also cited grantee assistance in gaining more autonomy for the school (in the case of new schools) and developing relationships with other principals and administrative leaders as significant assistance. The intensity of grantees' involvement with their schools varied considerably, according to principals' survey reports. Although the number of new and conversion school principals for whom we have survey data is small (just 14), 7 of them reported having many contacts with their grantees during the prior year, in the form of school visits, phone calls or e-mail, or meetings with school staff. On the other hand, more than a quarter of these principals reported a low level of grantee contact (frequencies of less than five for each of the three types of contact).

Other forms of support come from within the school and its surrounding community. Principals in start-ups reported more parent, community, and staff support than did principals in schools undergoing conversion.

Curriculum and Pedagogy

Differences in the degree of specificity in the grantees' interventions had implications for how school teams dealt with curriculum and instruction. Some schools, particularly those that were designed to replicate models, had relatively specific instructional structures and teaching materials available to them. Other schools, typically those designed to reflect general principles, were guided by abstract goals for teaching and learning (e.g., real-world connections), and did not have particular curricular or pedagogical designs. This was especially true of schools that were undertaking conversion; they were not replicates of a model, and most were still in the planning phase when we visited them. In general, grantees were more likely to provide teachers with support for learning new instructional approaches (particularly project-based learning) than they were to provide curriculum materials.

School staff in nearly all of the schools found that curriculum and pedagogy often took a back seat to other, more pressing issues. As described earlier, the degree of human and material capital that schools and grantees had to secure to either create or convert schools posed serious challenges. Staff were often left making choices and setting priorities, and these typically began with pouring energy into building human and material capital and designing or adapting school goals or designs. For example, securing facilities and recruiting staff and students were often key, early priorities for start-up schools. Schools undertaking conversion often focused on such structure and design issues as how and when the school would be converted and who would go to which academy or learning community.

In the small schools, teachers had responsibility for curriculum development. This was seen as both a blessing and a burden. Many teachers at these schools pride themselves on developing their own curriculum and were attracted to their school by the opportunity to do so. On the other hand, developing curriculum while providing students with the instruction and support they need and collaborating with colleagues around school design and operational issues requires enormous amounts of time and effort.

None of the start-up schools had a complete curriculum in place when the doors opened. The curriculum was developed by teachers along with all of the other activities that needed to happen in a very short time. Often, the curriculum that had been developed had to be changed as teachers learned that students were not prepared for the type of instruction the school had wanted to offer. Both start-up and conversion school staffs expect to be able to do more with curriculum and instruction as their small schools mature.

PROGRESS TOWARD IMPLEMENTING THE SCHOOL AND CLASSROOM ATTRIBUTES

The preceding section highlights the growing pains experienced during the first year of reform. Despite the many challenges, however, the start-up schools made significant progress toward implementing the foundation's school and classroom attributes, and the schools undertaking conversion began planning structures that could foster them.

Normative Climate

The foundation's choice to focus resources on reducing school size is supported by theoretical and empirical research that has identified size as an important ecological feature of the social structure of schools. Size has been identified as part of the physical environment that influences the nature of social interactions, including the frequency of communication between members and cohesion of the group (Barker & Gump, 1964; Bryk & Driscoll, 1988; Garbarino, 1980). Generally speaking, human interactions and ties become more formal and less personal as organizations grow in size (Weber, 1947).

Data from the start-ups and large schools undertaking conversion indicate that *personalization* is a key goal for them. Common strategies in start-ups for supporting personalization included advisories, student groupings, home visits, individual learning plans, and multiyear teams intended to foster personal relationships and personalized learning. Among the large schools undertaking conversion, those that were in the conversion process (rather than in the planning phase) described higher levels of personalization in the smaller learning communities they had created. Structures within those communities appeared somewhat similar to those in the start-ups and included houses, teams, or academies with individualized instruction, home visits, and smaller classes. On the student and teacher surveys, respondents in the start-up high schools in our sample had higher levels of personalization, compared with the large high schools that were planning but had not yet undertaken conversion.

In start-ups, the presence of and focus on personalization do not appear to come at the expense of academic rigor. When asked to compare their experience in these schools with that in other schools they have attended or that their friends attend, students in the start-ups described the *higher expectations* that their teachers held for their academic learning. Both teachers and students in start-up schools indicated that there were higher academic expectations for a broader set of students, compared with student and teacher responses from high schools undertaking conversion. Nevertheless, students and staff in start-up schools did not believe that the school could necessarily reach everyone. Cases where they did not feel they were succeeding were primarily those of students with extremely low motivation and associated behavioral issues, however, rather than those of low ability or certain demographic backgrounds. In the schools undertaking conversion, there was little evidence that high expectations for all students was a goal. In these schools, high expectations tended to be directed toward those students who were already achieving success (e.g., motivated, in high-level courses, etc.). However, there also appeared to be plans and actions to develop strategies to help students who were not doing well in schools undertaking conversion.

Fostering *respect and responsibility* was also a key goal cited by the schools in our study. Our findings suggest that personalization and respect and responsibility are strongly linked; personalization may lead to higher levels of respect and responsibility among members of the school community. Generally speaking, start-ups—where personalization is greater—also reported higher levels of respect and responsibility, compared with schools undertaking conversion. It is important to note that a number of schools, both in the start-up sample and among the large schools undertaking conversion, had put special programs in place to foster respectful behavior and a sense of responsibility. Recall, also, the earlier discussion about the need to prepare students for the type of learning environments that these schools are trying to create—the schools needed a certain level of orderliness before they could really develop the kind of teaching and learning that they had envisioned.

Professional Community

It was evident also, both in the interviews and in the survey data, that teachers in the start-up schools by and large enjoyed a strong sense of *professional community*. These teachers reported that they and their colleagues supported each other, were more likely to observe each other's classrooms or co-teach, and spent more time discussing issues of school structure, governance, and curriculum and instruction with each other. In most start-up schools, professional communities seemed to be in place, supporting a collegial environment and collaborative planning. Support for professional community included professional development opportunities and time for collaboration built into the school day.

Although many of the new schools sought to implement extensive mentoring and professional development opportunities and arranged teacher schedules to provide time during the school day for collaboration, the extent to which these steps were responsible for the resulting sense of community was unclear. Among the other factors that may support professional community in small schools is the fact that the teachers, who were specifically recruited for the school, typically shared a *common focus* or collective vision of the school's mission. The start-up schools gave priority to applicants' belief in the school vision when selecting teachers. Another aspect of the small-school design, shared decision-making, appeared to enhance both teachers' commitment to the school's vision and their sense of professional community. Nearly all of the start-up schools displayed some form of consensual decision-making and distributed authority. At the same time, a few teachers expressed concern over isolation from other teachers working in their subject area in these schools with so few staff.

Preconversion schools were less strong than the start-ups in terms of schoolwide professional community, but they did have a sense of community within departments. These schools also invested in professional development and time for collaboration, at least for those teachers involved in the redesign. Converting schools were working on strategies to extend professional community through such mechanisms as teaching teams that do cross-curricular planning. The sense of community within converting schools seemed to be influenced by the extent to which teachers participated in school governance. The fact that the schools with partial or complete conversions showed evidence of a sense of professional community within the converted portion or portions of the school suggests that professional community is one of the areas most quickly affected by conversion. Although very preliminary, this observation is heartening because the converted schools did not have the same advantage new schools did of recruiting their own teaching staff.

Academic Organization

The majority of start-up schools had put in place academic organizational structures designed to promote personalization and rigorous teaching and learning (see Table III-2). These included advisories, individualized personal learning plans, mixed-ability groupings, extended instructional periods and college course offerings. Only two start-up schools had their internship program fully in place for all students during their first year of operation, but an additional five schools plan mandatory internships.

Student assessment was another area in which start-up schools were still defining their practices. Two start-up schools indicated that they planned to use competency-based promotion policies, but the school that was most obviously *performance based* in terms of its academic organization (Freedom High School) is no longer associated with the foundation initiative. The grantee working with this school became concerned that its implementation of performance-based advancement through a set curriculum would result in a defacto tracking of fast and slow learners. The challenge that schools face is to find paths that advance individual students when they are ready but also ensure that all students receive rigorous content and pedagogy and that all students have equal educational opportunities. In this regard, traditional high school structures have not been successful. Students are often grouped by "ability" (i.e., tracking) and receive very different educational experiences of very different quality. Typically, students most in need of academic attention are those less likely to receive the highest-quality educational experiences (Oakes, 1987). Other start-up schools, following models such as Minnesota New Country and The Met, are requiring the demonstration of skills and knowledge through project work, but it is not clear yet how they will deal with students who have conducted projects but not demonstrated the specified skills or level of understanding. Personal learning plans, a practice that the foundation expects to accompany personalization, were the exception rather than the rule in both the start-up schools and the converting large schools so far, but many schools said they do plan to use this approach in the future.

Converting schools were in the process of planning academic organization structures for their small learning communities at the time of the site visits. While many of them were planning structures similar to those in place at the start-up schools, it will be another year before we can compare the structures they actually put in place to those at schools in our start-up sample.

Classroom Attributes

Whereas the start-up schools appeared to be succeeding in terms of putting the desired elements of normative climate and professional community into place, evidence regarding implementation of desired features with respect to classroom instruction appears more mixed. Fewer than 20% of the activities observed in classrooms at either start-up schools or converting large schools met our criteria for *active inquiry* and *in-depth learning*, and the observed classrooms in start-up schools and preconversion schools were similar in likelihood of exhibiting these classroom attributes.[17] In interviews, teachers in the classrooms observed in start-up schools were more likely than those in preconversion schools to indicate that the observed activity was part of a long-term project. On the other hand, survey responses from teachers in start-up schools were more likely than those of teachers in preconversion schools to suggest that they emphasize student research and analysis and other constructivist methods and call on students to learn about topics in depth.[18] Teachers in preconversion schools were more likely to report using traditional instructional approaches and spending time preparing their students for standardized tests.

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[17] We would not argue that *all* classroom activities should involve active inquiry and in-depth learning. We recognize that there is a place for lecturing and a place for traditional active instruction, as well. The issue arises because some students,

Teachers in many of the start-up schools did emphasize project-based learning. Not all of the observed projects appeared to be strong exemplars of the concept of project-based learning, however; some gave students choice only with respect to mundane options and appeared to involve relatively conventional content (e.g., student decisionmaking consisted of choosing which of the human body organ systems to study). Considering all the various types of data available to us, it appears that teachers in the start-up schools are trying to implement approaches that support active inquiry and in-depth learning but have not yet mastered these approaches to the level found in the model schools.

Finally, teachers in general appeared to use a variety of assessment methods, including both conventional multiple-choice tests and various forms of portfolios or *performance assessment.* On the teacher survey, this was the only classroom construct for which the small schools did not differ significantly from the large schools.

Schools were spotty also in terms of the use of *technology as a tool.* For the most part, neither the start-up schools nor the large converting schools had students and teachers who described lack of access to technology as a problem. But the level of incorporation of technology into instruction was relatively low. Teachers at start-up schools reported students' using technology for activities such as writing, exploring ideas, and analyzing information somewhat more often than teachers at the large schools did, but the most common instructional use of computers in both sets of schools was practice on basic skills. Instructional use of technology was another attribute that was stronger in the model schools than in the start-ups. Innovative technology probably suffered in the setting of priorities for the first year of the start-up schools. We may well see more creative instructional uses of technology in future years, especially as those grantees with a technology emphasis in their designs get schools up and running.

All of the challenges we have discussed help explain our findings about the teaching and learning that we observed in the schools we visited and surveyed. Start-ups are more likely to be implementing practices such as multidisciplinary instruction, project-based learning, and extended student projects, but are still working on making student inquiry, in-depth treatment of content, and the integration of technology central to their practice.

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particularly those from disadvantaged backgrounds, receive little or no instruction engaging them in active inquiry. Although there is no "rule" for how much active inquiry and in-depth learning is optimal, we note that 26% of activities observed in the model schools were so classified.

[18] Both types of data have limitations, of course. Observations cover only short time periods and a very small proportion of the teaching staff in a large school. Surveys collect retrospective self-reports and are vulnerable to response biases related to the desire to make a good impression.

ENGAGING STUDENTS

We have also examined this first year of new small high schools from the perspective of the students attending them. Implicit in the foundation's theory of change is the assumption that putting certain school design elements in place (e.g., small size; promotion based on performance; structures, such as advisories, that foster close relationships between students and teachers) will lead to schools with better outcomes for all students—schools where students are more engaged and where struggling students don't "fall through the cracks." Although it is too soon to have outcomes such as test scores, graduation rates, or college attendance for students from the first small schools emerging from this initiative, we can examine students' academic self-concept, engagement, and persistence in school.

On the basis of student survey responses (see Chapter V), it is clear that students in the new small schools feel better about themselves as learners, exhibit more behaviors indicative of school engagement (such as contributing in class or getting help on schoolwork when they need it), and feel more a part of their school than do their counterparts at the large schools in our sample. Although we cannot rule out the possibility that these large differences reflect to some degree preexisting differences in the types of students attending the two sets of schools, we do know that the differences in terms of students' engagement, academic self-concept, and sense of belonging are large even when we control for variables that might otherwise account for the observed differences: gender, race/ethnicity, parents' education, and the number of languages other than English spoken in the home.

Importantly, students in the start-up schools appear to be no more advantaged than those in the preconversion schools in terms of the demographic variables usually associated with differences in school achievement. (The two groups did not vary in terms of likelihood that their mothers received some college education; however, students in the start-up schools were more likely than those in the preconversions to come from homes where languages other than English are spoken and to be nonwhite.) There is no way, however, that our analysis can control for all of the less tangible variables potentially associated with choosing to attend one of these new small schools (e.g., the family's valuing of education), and we must acknowledge that these variables may affect students' outlook and motivation. Nonetheless, many of the findings reported above are consistent with the foundation's hypotheses about the positive effects that are associated with small schools.

IMPLICATIONS FOR THE INITIATIVE

Given the early stage of the grantees' work with schools, the new small schools' operations, and our own research, we need to be modest about making recommendations for the program. However, our findings thus far, described and discussed above, do have several implications for areas warranting further attention.

Implications for Grantees and Schools

In structuring their work with schools, grantees should consider the leverage they will have with a potential partner as well as that partner's capacity. As noted above, there appears to be a significant rate of attrition among the grantee-school relationships in this first batch of small schools. In most of these cases, either the school lacked one or more essential elements of capacity (e.g., a facility for their school) or the agreement between the grantee and the school team in terms of school design features was weak. Many of the grantees are doing a careful job of examining capacity elements before committing to a partnership with a school. Also important, however, particularly in cases where the grantee wants to see particular school designs or design principles in place, is the amount of influence the grantee will have with the school. The extent of a grantee's influence is increased when the grantee offers resources—financial, intellectual, and practical—that the school views as valuable.

Grantees providing more significant funding supports, more specific guidance, and more hands-on, continuous coaching increase their influence with their schools. In cases where the grantee is providing limited funding, has limited authority, and is in limited contact with the school, it is hard to be a significant influence. This issue of leverage has implications for the number of schools with which a grantee can work effectively, their geographic spread, and the nature and amount of resources the grantee gives each of its school partners. We might expect the problem to be particularly acute for conversion efforts, where the grantee must work with a broader range of stakeholders, including the district and the teachers' union, and with teachers who may view themselves as conscripts in yet another education reform activity rather than as recruits for the exciting adventure of starting a new small school. Mechanisms for keeping abreast of school plans and activities and for establishing accountability (e.g., incremental funding depending on progress against milestones) can enhance the grantee's effectiveness.

Schools need specific resources and tools. School design teams and the staff in new schools are finding that they need to devote much time and energy to the nuts and bolts of school operation, including many mundane logistical issues. They find themselves severely strapped for time to devote to their students and to working on curriculum and instruction. High-level descriptions of general principles are useful for inspiring groups to undertake school reform, increasing a sense of common vision, and directing early planning discussions, but as teams move closer to opening their schools, they need more detailed, specific resources. To the extent that grantees can provide specific materials, procedural descriptions, and tools that their partners can use to design and run their schools, school staff can be freed up to focus on issues of teaching and learning. As noted in Chapter VI, providing specific materials and tools is not the same thing as being prescriptive. Schools would like to have more specific aids but they can be given choices among alternative specific approaches and the freedom to make adaptations.

New small schools should expect to devote considerable energy to establishing a positive normative climate during their early years. Staff at the start-up schools expressed some surprise at the lack of preparedness among their entering students for the kind of instruction, depth of learning, and degree of responsibility offered in the new schools. This lack of preparation reflected both weak basic skills among some incoming students (many more of whom had special education needs than the school design teams had anticipated) and the fact that many of the incoming students had experienced lockstep, teacher-centered education. In their planning, school teams can challenge themselves to think through the feasibility of their plans in the event that a large proportion of their students arrive reading at the 5th-grade level. As start-up schools and school conversion teams design their schools' academic organization, they can consider the option of a transitional semester or year in which 9th-grade students are gradually introduced to increasing amounts of freedom and self-direction.

Implications for the Foundation and the Field

In structuring future grants to intermediary organizations, the foundation should consider options such as planning grants or gradual ramping up in cases where the proposed work requires

organizational capabilities that are not yet in place. Chapter VI makes the case for the importance of an organization's human, social, and material capital for undertaking education reform work. A grantee's organizational capacity should be examined in relation to the nature and scope of the work the organization proposes to do. Some organizations may need a planning year before starting or converting schools, particularly if their strategy is dependent on the formation of partnerships (e.g., with a district or an institution of higher education) that are not yet in place. An initial period for building grantee organizational capacity should be expected for organizations that are new or undertaking new roles.

The construct of intervention strength, discussed in Chapter VI, may be helpful in reviewing grantee work plans. To be a significant support for their schools and have a significant influence on them, grantees need to bring resources that the schools view as valuable. Some grantees have pledged substantial financial support for school start-up or conversion; others plan on providing very modest funding. It may take time for some organizations to develop a critical mass of intellectual and practical resources that they can provide to schools. Beginning their small-school creation efforts with a few schools before broadening their reach is a prudent strategy.

Funders of reform should look closely at the amount of planning time they are funding for the creation of new or converted schools. Starting a new school or converting a large, comprehensive high school takes time. If the goal is to establish a system of distributed leadership, the teachers who will be the core staff need extensive funded planning time, just as the principal does. The foundation and its grantees should be commended for providing funding for planning and incorporating paid time for teacher collaboration into their school designs and planning processes. Reports from school teams in spring 2002, however, suggest that many of them felt they did not have enough time, and many teachers in both start-ups and preconversions worked to plan their small schools during evenings around a full-time job. The compressed time frame necessitated if the school was to open in the fall of 2001 was a major limitation for teams starting new schools. Those planning conversions were constrained by their ongoing teaching or leadership responsibilities. Release from at least a portion of their school duties during the year prior to school opening or school conversion would be a welcome support for a core of teachers, as well as the prospective principal.

The ability to make rapid progress by working around the system in starting new small schools may decline as the initiative unfolds. Some of the grantees have been able to get off the ground quickly by recruiting staff and students for new small charter schools, freed from many district requirements. The large-school conversion process, in contrast, is proceeding more slowly. Over time, grantees starting new small schools may feel pressure to work more closely with districts, especially if they aspire to saturate a given geographic area with many small schools. Budgetary pressures and concerns about sustaining their efforts may also drive more of the grantees to work more within the system. It is not clear to what extent the new-schools strategy's apparent advantage in terms of making an impact sooner will persist over time.

As the next year of the initiative unfolds, we will continue to observe the processes and results. Among the many questions that we will pursue are: What does the next year of reform bring? How have teaching and learning changed in these schools? How do the contextual settings of these schools affect their activities? To,what extent do teachers and students move in and out of these schools? What have grantees learned, and how have they changed their approaches to working with schools? Answers to these questions will guide the next chapter of this evolving story.

The road to significant, lasting high school reform is both long and bumpy. School staff are faced with the necessity of anticipating and addressing a host of needs and demands on the part of students, colleagues, and school stakeholders. It is unlikely that any school can meet all of these needs and demands in its first few years of operation. School staff need to prioritize the issues they will address, and funders and supporters need to be patient backers if this groundbreaking innovation is to succeed.

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APPENDIX A

QUALITATIVE TECHNICAL APPENDIX

Like the National School District and Network Grants Program itself, the evaluation design attends to the multiple levels of the education system (districts, schools, classrooms). The evaluation employs a multilevel, mixed-method design to examine the work and progress of the initiative. This appendix begins with a description of the overall design of the evaluation and concludes with detail on the qualitative data collection activities. Appendix A discusses the grantee and school sampling plans, the characteristics of sites in the 2001-02 school data collections, and the conceptual framework that guided instrument development and data analysis. The second half of the appendix describes the qualitative data collections and data analysis activities. Appendix B describes the school survey methods and data.

EVALUATION DESIGN

The evaluation design for the initiative includes four interrelated research strands:

- *Case studies of foundation grantees* to describe and assess the several intervention strategies the foundation is supporting.
- *School qualitative strand* to obtain a dynamic picture of the processes of school change and its relationship to school and student outcomes.
- *School survey strand* to assess both intermediate and longer-term outcomes and the relationships between grantee interventions and outcomes.
- *Student achievement strand* designed specifically to assess student learning and the relationship between student learning and school and instructional attributes.

This appendix discusses samples, the conceptual framework that guided instrument development and data analysis, and methods used in the first two strands. More specifically, it documents the sampling design for grantees and schools, the characteristics of sites in the 2001-02 school data collections, data collection activities for the first two strands, and the data analysis methods for the qualitative data. Appendix B describes the school survey strand. (Data were not collected for the fourth evaluation strand in 2001-02; student achievement data will be gathered as the initiative and evaluation move forward.)

Sampling Design

We began our case study research with foundation grantees in the summer of 2001. At that time, the foundation had funded 19 organizations, including urban school districts, network organizations working directly with school, organizations providing technical assistance to other grantees on issues central to school reform (e.g., on school leadership), and organizations advocating for more positive policy environments for school change (e.g., for performance-based assessment).

In the spring of 2002, we returned to these grantee organizations. In this report and our qualitative research, we focus on the 12 of the original 19 grantees working directly with educators and communities to start new small secondary schools or to convert large high schools into small learning communities.

At the time we were selecting schools for the spring 2002 data collection, these 12 organizations were working with 39 schools under the grant program. Some of the schools were models of the school designs grantees hoped to replicate, some were newly created or restructured small schools in 2001-02, and some were large schools beginning to convert or planning for a fall 2002 conversion into small learning communities. Our design called for conducting surveys and site visits in 5 model schools, 10 start-up schools, and 5 schools undergoing conversion, and conducting surveys only in an additional 5 schools undergoing conversion. Two start-up schools and one school that had undergone conversion declined to participate in the major data collection activities (the two start-up schools did provide principal interviews) in light of the other pressures they were facing during 2001-02. We were able to arrange a substitute school for the declining school undergoing conversion. One school that had converted into three academies and one school planning conversion did participate in the data collection but had such low response rates for the student and teacher surveys that they could not be included in the survey data analysis, but qualitative data from sites visits conducted at those schools are included in Chapter IV. In view of the loss of two start-up schools from the site visit sample, we conducted site visits at an additional two schools undergoing conversion. Table A-1 shows the population of schools, the intended samples, and the final samples for both surveys and site visits. As the Exhibit shows, our final qualitative school sample included approximately half of the population of schools partnering with grantees in 2001-02.

Table A-1
School Populations and Samples

School Type	Number Working with Grantees in 2001-02	Initially Planned Sample Design		Final Samples	
		Survey	Site Visit	Survey	Site Visit
Model schools	5	5	5	5	5
New small schools[a]	19	10	10	8	8
Large-school conversions[b]	15	10	5	8[c]	7

[a] Those that opened in fall 2001.

[b] Those that converted in fall 2002 or earlier.

[c] Surveys were administered in two additional large schools, but response rates were too low to justify inclusion in data analyses.

School Characteristics

Tables A-2, A-3, and A-4 show the characteristics of the model, start-up, and large schools we visited in 2001-02. These figures describe the types of communities in which the schools reside, the organizational authority under which the schools operate (e.g., as charter schools or regular public schools), the enrollment practices followed by the schools (e.g., choice or neighborhood), the grade levels currently served by the schools and those they plan to target, the enrollment levels in 2001-02, the size of the faculty in 2001-02, and whether schools were previously identified by their districts or states as underperforming. (Note that newly created schools were not subject to review by their jurisdictions in 2000-01.) Pseudonyms are used for school names for start-up, preconversion, and conversion schools. Model schools' actual names are used throughout this report.

Tables A-5, A-6, and A-7 describe the characteristics of the teachers and principals in these schools. These figures show how many years of experience as a principal the school leader had by 2001-02; how many teachers were in the school; how many years of teaching experience the faculty had, on average; the percentage of faculty who were female, African-American, Hispanic, Asian/Pacific Islander, multiethnic, and white; and the percentage of faculty who held regular, probationary, or advanced teaching licenses.

Tables A-8, A-9, and A-10 show the characteristics of students in these schools. These figures show the number of students in the school; the percentages of students who were female, African-American, Hispanic, Asian/Pacific Islander, and white; the percentage on free or reduced-price lunch; the percentage who were English language learners; and the average attendance rates of students.

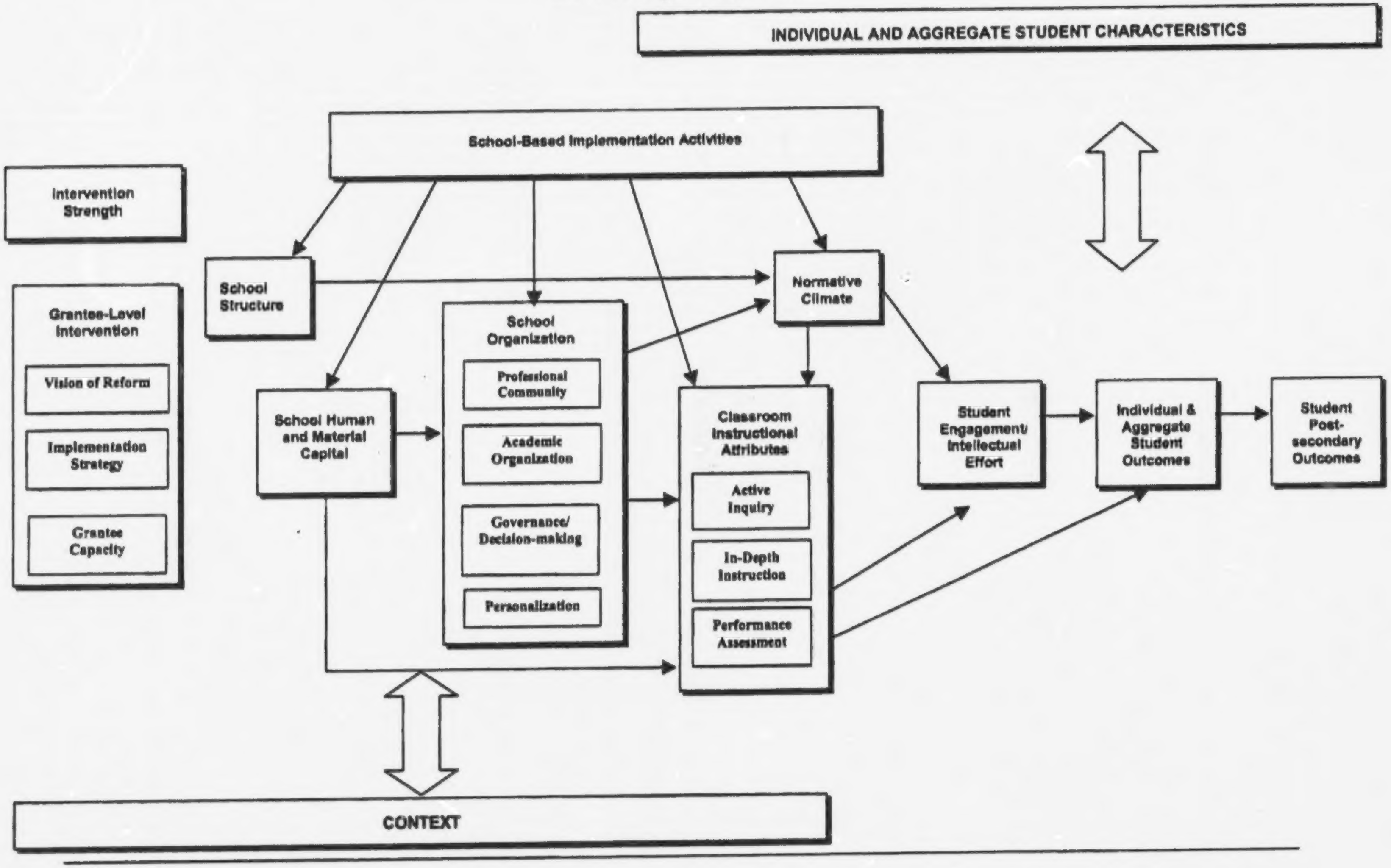
Conceptual Framework

Building on the foundation's theory of change, we developed a conceptual framework to guide the development of both qualitative and quantitative data collection instruments. The conceptual framework was intended to place the foundation's theory of change in the broader context of the research literatures on effective schools and education reform. Figure A-1 provides a graphic illustration of the major elements of the framework.

Reflecting its derivation from the foundation's theory of change, this framework concentrates on the predicted impact of grantees on the schools and students with which they work. Thus, the framework depicts student outcomes (on the far right-hand side of Figure A-1) as the ultimate dependent variable of interest and the foundation-supported activities (funded through the grantees; far left-hand side of the model) as the main independent variable or intervention of interest. Also, as in the theory of change, the impact of the intervention is predicted to occur through the grantees' influences on specified characteristics of schools and classrooms. More specifically, the conceptual framework portrays grantee interventions as influencing the presence and strength of characteristics associated with high-performing schools and with in-depth, inquiry-based instruction. These in turn are posited to positively influence student engagement and intellectual effort, student learning, and ultimately postschool outcomes.

Overall, the conceptual model depicted in Figure A-1 posits that the impact of foundation-supported activities will be influenced by a combination of grantee-level factors, including the grantees' *vision*, *strategy*, and *capacity* and the ways these interact to influence the overall *strength of the grantee's intervention*. These grantee-level factors will then influence various aspects of the schools with which the grantees work (including the *school's structure, organization, human and material capital, and normative climate*) and of the *classroom instruction* within those schools. Some of these school characteristics are also posited to influence one another, and all are expected to be affected by the environmental context in which the school resides. The school characteristics are then expected to have an impact on students, first through *student engagement and intellectual effort* and ultimately through specified *student outcomes* in high school and beyond. As with environmental context, individual and aggregate student characteristics are posited as important influences on the success of grantees' work that are extrinsic to the intervention.

Figure A-1
Conceptual Framework for National School District and Network Grants Program Evaluation


INDIVIDUAL AND AGGREGATE STUDENT CHARACTERISTICS
School-Based Implementation Activities
Intervention Strength
Grantee-Level Intervention
Vision of Reform
Implementation Strategy
Grantee Capacity
School Structure
School Human and Material Capital
School Organization
Professional Community
Academic Organization
Governance/ Decision-making
Personalization
Normative Climate
Classroom Instructional Attributes
Active Inquiry
In-Depth Instruction
Performance Assessment
Student Engagement/ Intellectual Effort
Individual & Aggregate Student Outcomes
Student Post-secondary Outcomes
CONTEXT

This conceptual framework expands on the theory of change in several ways. For example, on the basis of our review of the relevant literature, we have unpacked the attributes of high-achieving schools, placing them into two interrelated dimensions of schooling: school structure and normative climate. We have also added variables left out of the theory of change, such as the quality and the stability of instructional staff (which the framework posits as part of the human and material capital available to the school). Figure A-1 also recognizes that student learning is co-produced by teachers and students together. Thus, the impact of instruction occurs primarily through its effect on the active engagement and effort on the part of students.

Implicit in this figure is the assumption of considerable variation in outcomes. Investigating and explicating the sources of variation are important aspects of this evaluation, because by doing so, we can better understand the conditions and strategies that are most likely to facilitate the desired results.

Potential sources of the anticipated variation in outcomes include (1) the nature of the grantee intervention strategies, (2) variations in school context and implementation, and (3) differences in school capacity, will, and understanding, which include the characteristics of students.[19]

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[19] From years of studying secondary teaching, McLaughlin, Talbert, and their colleagues (McLaughlin & Talbert, 2001) conclude that students are in fact the most salient and influential context for high school teachers.

Table A-2
Characteristics of Model Schools

School Name	Community Type	School Authority	Enrollment Policy	Target Grade Levels	Current Grade Levels	Number of Students	Number of Teachers	Previous Identification by Jurisdiction as Low/Underperforming School[a]
High Tech High School San Diego	Urban	District charter	Choice/Open	9-12	9-11	280	22	N
Leadership High School[b]	Urban	District charter	Choice/Open	9-12	9-12	335	25	N
Metropolitan Regional Career & Technical Center[c]	Urban	State public	Choice/Open	9-12	9-12	104	9	Y
Minnesota New Country School	Rural	District charter	Choice/Open	7-12	7-12	124	12	N
New Technology High School	Suburban	Public	Choice/Open	11-12	11-12	223	10	N

Source: School demographic survey, principal survey, and site visits.

[a] Newly opened schools and some charters were not subject to review by their jurisdictions in 2000-01.

[b] Leadership High School represents the BayCES principles but is not a model for replication by the grantee's school partners.

[c] The Metropolitan Regional Career & Technical Center is a public high school open to all students in the state. It operates much like a charter school, with some autonomy over budget, curriculum, hiring, and student recruitment.

Table A-3
Characteristics of Start-up Schools

School Name[a]	Community Type	School Authority	Enrollment Policy	Target Grade Levels	Current Grade Levels	Number of Students	Number of Teachers	Previous Identification by Jurisdiction as Low/Underperforming School[b]
Cedar Hill	Urban	District charter	Choice/Open	9-12	9	120	8	Not avail.
Del Monte	Urban	District charter	Choice/Open	9-12	9-10	50	7	N
DeSoto	Urban	Public	Choice/Open	9-12	9-12	351	28	Y
Freedom	Urban	District charter	Choice/Open	9-12	9	105	14	N
Green Gables	Urban	District charter	Choice/Open	9-12	9-10	108	11	N
Lakeshore	Urban	Public		10-12	10	73	4	Not avail.
Somerville	Suburban	District charter	Choice/Open	9-12	9	80	10	N
Springtown	Urban	Public	Choice/Open	9-12	9-12	250	16	N

Source: School demographic survey, principal survey, and site visits.

[a] School names are pseudonyms.

[b] Newly opened schools and some charters were not subject to review by their jurisdictions in 2000-01.

Table A-4
Characteristics of Converting Schools

School Name[a]	Community Type	School Authority	Enrollment Policy	Current Grade Levels	Number of Students	Number of Teachers	Previous Identification by Jurisdiction as Low/Underperforming School
Campbell	Urban	Public	Choice/Open[b]	9-12	2,156	106	N
Clearwater	Suburban	Public	Neighborhood	9-12	1,129	75	Y
Community	Urban	Public	Neighborhood	9-12	80	80	Y
Hillside[c]	Urban	Public	Neighborhood	7-12	1,341	65	N
Logan	Urban	Public	Choice/Open	9-12	1,415	84	Not available
Morristown[c]	Suburban	Public	Neighborhood	9-12	1,379	76	N
Salazar[c]	Urban	Public	Neighborhood	9-12	1,650	130	Y
Sullivan: Academy 1	Urban	Public	Choice/Open[b]	9-12	Not avail.	25	Y
Sullivan: Academy 2	Urban	Public	Choice/Open[b]	9-12	Not avail.	21	Y
Sullivan: Academy 3	Urban	Public	Choice/Open[b]	9-12	Not avail.	19	Not available
Von Humboldt	Suburban	Public	Neighborhood	9-12	1,247	79	N
Western	Urban	Public with choice magnet	Neighborhood	9-12	1,131	77	Y

Source: School demographic survey, principal survey, and site visits.

[a] School names are pseudonyms.

[b] Although there is an open-enrollment policy in place, most students come from the neighborhood around the school.

[c] In survey sample only.

Table A-5
Characteristics of Staff In Model Schools

School Name	Principal's Years of Experience	Number of Teachers	Average Years of Teaching	Percent Female	Percent African-American	Percent Hispanic Origin	Percent Asian/Pacific Islander	Percent Other/Multi-ethnic	Percent White	Percent Certified
High Tech High School San Diego	9	22	4.8	75.0	7.1	7.1	14.3	0.0	71.4	68.8
Leadership High School[a]	Not avail.	25	6.3	68.4	15.8	5.3	5.3	0.0	73.6	68.4
Metropolitan Regional Career & Technical Center	1	9	4.2	44.4	0.0	25.0	12.5	0.0	62.5	55.6
Minnesota New Country School	7	12	8.2	27.3	0.0	0.0	0.0	0.0	100.0	81.8
New Technology High School	6	10	7.9	55.6	0.0	11.1	11.1	0.0	77.8	100.0

Source: School demographic survey, principal survey, and site visits.

[a] Leadership High School represents the BayCES principles but is not a model for replication by the grantee's school partners.

Table A-6
Characteristics of Staff in Start-up Schools

School Name[a]	Principal's Years of Experience	Number of Teachers	Average Years of Teaching	Percent Female	Percent African-American	Percent Hispanic Origin	Percent Asian/Pacific Islander	Percent Other/Multi-ethnic	Percent White	Percent Certified
Cedar Hill	1	8	9.9	25.0	0.0	37.5	0.0	12.5	50.0	75.0
Del Monte	15	7	3.4	57.1	0.0	14.3	0.0	0.0	85.7	83.3
DeSoto	4	28	9.6	54.2	18.2	9.1	4.6	9.1	59.1	70.8
Freedom	1	14	9.2	42.9	14.3	0.0	28.6	0.0	57.1	71.4
Green Gables	3	11	5.5	80.0	0.0	0.0	11.1	0.0	88.9	80.0
Lakeshore	7.0	4	3.8	75.0	33.3	33.3	0.0	0.0	33.3	25.0
Somerville	0	10	12.0	40.0	20.0	20.0	0.0	0.0	60.0	100.0
Springtown	0	16	5.9	50.0	0.0	18.2	18.2	9.1	54.6	60.0

Source: School demographic survey, principal survey, and site visits.

[a] School names are pseudonyms.

Table A-7
Characteristics of Staff in Converting Schools

School Name[a]	Principal's Years of Experience	Number of Teachers	Average Years of Teaching	Percent Female	Percent African-American	Percent Hispanic Origin	Percent Asian/ Pacific Islander	Percent Other/ Multi-ethnic	Percent White	Percent Certified
Campbell	0	106	13.8	65.7	3.3	3.3	1.7	5.0	86.7	92.5
Clearwater	9	75	15.7	52.7	4.1	4.1	0.0	4.1	87.8	89.1
Community	3	80	Not avail.	Not avail.	Not avail.	Not avail.	Not avail.	Not avail.	Not avail.	Not avail.
Hillside[b]	2	65	19.2	60.3	27.8	1.9	3.7	7.4	59.3	83.1
Logan	Not avail.	84	15.1	61.1	2.1	4.2	4.2	0.0	89.6	96.3
Morristown[b]	2	76	14.7	66.1	0.0	0.0	0.0	1.7	98.3	81.0
Salazar[b]	19	130	15.0	51.9	12.5	3.8	1.3	7.5	75.0	67.8
Sullivan: Academy 1	21	25	Not avail.	Not avail.	Not avail.	Not avail.	Not avail.	Not avail.	Not avail.	Not avail.
Sullivan: Academy 2	1	21	Not avail.	Not avail.	Not avail.	Not avail.	Not avail.	Not avail.	Not avail.	Not avail.
Sullivan: Academy 3	Not avail.	19	Not avail.	Not avail.	Not avail.	Not avail.	Not avail.	Not avail.	Not avail.	Not avail.
Von Humboldt	0	79	15.5	53.7	0.0	1.6	0.0	98.4	98.4	77.6
Western	4	77	11.4	48.7	2.8	5.6	2.8	2.8	85.9	67.5

Source: School demographic survey, principal survey, and site visits.

[a] School names are pseudonyms.

[b] In survey sample only.

Table A-8
Characteristics of Students in Model Schools

School Name	Number of Students	Percent Female	Percent African-American	Percent Hispanic Origin	Percent Asian/Pacific Islander	Percent Other/American Indian/Alaska Native	Percent White	Percent Eligible for Free/ Reduced-Price Lunch	Percent English Language Learners	Average Attendance Rate (percent)
High Tech High School San Diego	280	38.2	18.1	17.7	17.7	1.5	45.0	23.6	2.6	95.0
Leadership High School[a]	335	59.4	26.6	31.6	22.2	0.0	19.6	21.8	Not avail.	99.5
Metropolitan Regional Career & Technical Center	104	51.9	25.0	34.6	2.9	3.8	33.7	74.0	38.5	Not avail.
Minnesota New Country School	124	44.4	1.4	5.6	0.0	0.0	93.1	18.1	0.0	Not avail.
New Technology High School	223	39.9	5.8	9.0	17.5	0.0	67.7	4.5	5.8	97.5

Source: School demographic survey, principal survey, and site visits.

[a] Leadership High School represents the BayCES principles but is not a model for replication by the grantee's school partners.

Table A-9
Characteristics of Students in Start-up Schools

School Name[a]	Number of Students	Percent Female	Percent African-American	Percent Hispanic Origin	Percent Asian/Pacific Islander	Percent Other/American Indian/Alaska Native	Percent White	Percent Eligible for Free/ Reduced-Price Lunch	Percent English Language Learners	Average Attendance Rate (percent)
Cedar Hill	120	53.3	9.2	56.7	0.0	5.8	28.3	75.0	27.5	Not avail.
Del Monte	50	50.0	8.0	10.0	12.0	0.0	70.0	22.0	2.0	Not avail.
DeSoto	351	52.6	28.1	42.0	10.9	1.2	17.8	54.4	7.1	Not avail.
Freedom	105	37.1	81.0	14.3	0.0	0.0	4.8	61.0	0.0	Not avail.
Green Gables	108	61.1	13.9	3.7	11.1	3.7	67.6	14.8	0.9	Not avail.
Lakeshore	73	Not avail.	Not avail.	Not avail.	Not avail.	Not avail.	Not avail.	Not avail.	Not avail.	Not avail.
Somerville	80	45.0	32.5	57.5	10.0	0.0	0.0	97.5	5.0	97.5
Springtown	250	62.0	25.0	49.2	24.2	0.8	0.8	53.5	51.2	Not avail.

Source: School demographic survey, principal survey, and site visits.

[a] School names are pseudonyms.

Table A-10
Characteristics of Students in Converting Schools

School Name[a]	Number of Students	Percent Female	Percent African-American	Percent Hispanic Origin	Percent Asian/Pacific Islander	Percent Other/American Indian/Alaska Native	Percent White	Percent Eligible for Free/ Reduced-Price Lunch	Percent English Language Learners	Average Attendance Rate (percent)
Campbell	2,156	51.0	15.8	4.9	43.2	2.2	33.8	65.6	37.8	92.0
Clearwater	1,129	51.0	35.6	21.6	6.6	1.2	35.1	80.0	1.9	91.5
Community	1,766	50.2	58.9	34.1	6.5	0.1	0.4	35.1	31.6	70.5
Hillside[b]	1,341	48.7	75.2	1.1	0.7	0.4	22.4	28.7	3.4	87.0
Logan	1,415	50.9	18.0	7.3	24.8	1.0	48.9	49.0	11.7	85.0
Morristown[b]	1,379	50.5	0.4	0.4	0.5	0.4	98.3	7.3	0.4	82.6
Salazar[b]	1,650	51.6	65.0	0.0	1.0	0.0	34.0	Not avail.	0.0	84.8
Sullivan: Academy 1	1,018	Not avail.	Not avail.	Not avail.	Not avail.	Not avail.	Not avail.	Not avail.	Not avail.	Not avail.
Sullivan: Academy 2		Not avail.	Not avail.	Not avail.	Not avail.	Not avail.	Not avail.	Not avail.	Not avail.	Not avail.
Sullivan: Academy 3		Not avail.	Not avail.	Not avail.	Not avail.	Not avail.	Not avail.	Not avail.	Not avail.	Not avail.
Von Humboldt	1,247	50.2	0.6	0.6	1.2	0.0	97.7	4.1	0.2	96.3
Western	1,131	50.0	13.2	24.4	11.5	0.3	50.7	51.0	8.6	87.4

Source: School demographic survey, principal survey, and site visits.

[a] School names are pseudonyms.

[b] In survey sample only.

QUALITATIVE DATA COLLECTION METHODS

Grantee Organizations

Two-person teams conducted the grantee, district, and school site visits. Within grantee organizations, site visitors interviewed three to five key players and staff. Among them was the principal investigator for the grant, his or her deputies, and the internal evaluator if there was one. Some grantee organizations also had coaches or liaisons for schools in our qualitative sample, and we interviewed these individuals.

In interviews with grantee organization staff, the site visit teams focused on grantees' goals and progress. Interviews with grantee staff employed protocols designed to capture information concerning the evolution of the grantee's vision for small schools, the specific schools the grantee was working with and timetables for their activities, resources provided to those schools, barriers and facilitators encountered in their work with schools, and efforts to build organizational capacity.

Districts

In cases where the grantees were working closely with a district, district staff members were interviewed. Typically in these cases, site visitors interviewed the superintendent or deputy superintendent (whichever made sense, given the responsibilities of the district staff) and the reform manager, high school director, or other member familiar and involved with the reform effort. Site visitors sought context concerning the community in which the schools operated, district reform efforts, accountability requirements, district perceptions of the Gates foundation-supported work, and any ways in which the district planned to support the grantee's work with schools.

Schools

School site visits were conducted with the support of a school staff member assigned to coordinate sample selection and scheduling. Two-person teams visited each school over a period of 2 to 4 days, as needed to complete the activities described below. Interviews and focus groups were audiotaped to support the completeness and accuracy of the data records.

Principal and Lead Staff

Site visit teams began and ended school visits with principal interviews (where possible). Site visitors also interviewed reform facilitators, coaches, and others considered key to the success of the reform. These interviews covered topics such as conception of the school's mission, supports attributed to the grantee organization, school governance, and academic organization.

Teachers

Site visit teams interviewed five teachers at each school. Interview teachers were selected to meet the following criteria at schools where the criteria were consonant with the structure of the staff:

- Teacher A: Someone who teaches math in the 9th grade and teaches students considered to be high achieving. (If the school does not have a 9th grade, the alternative would be the lowest grade level at the school above 8th grade—e.g., 10th, 11th.)
- Teacher B: Someone who teaches math in the 9th grade and teaches students who struggle academically. (If the school does not have a 9th grade, the alternative would be the lowest grade level at the school above 8th—e.g., 10th, 11th.)
- Teacher C: Someone who teaches composition/language arts in the 9th grade and teaches average students. (If the school does not have a 9th grade, the alternative would be the lowest grade level at the school above 8th—e.g., 10th, 11th.)
- Teacher D: Someone who teaches composition/language arts in the 11th grade and teaches average students. (If the school does not have an 11th grade, the alternative would be the highest grade level at the school above 8th—e.g., 9th, 10th.)
- Teacher E: Someone who teaches an innovative class (e.g., service learning, career course, student advisory, etc.), preferably at a higher grade level in the school.

These categories were incongruent with the school structures of some of the schools, particularly the model schools. For example, some schools don't have discrete composition/language arts or mathematics classes; in these cases, we asked leaders to identify teachers of classes where mathematics and composition/language arts were substantial parts of instruction. Some of these schools don't group students by grade level or achievement in mathematics and language arts. In these cases, we selected teachers so that their five classes represented a range of student grades and performance levels. In schools with very small numbers of teachers, we had to go beyond mathematics, composition/language arts, and innovative coursework to other subject areas to obtain five teachers for interviews. Site visit teams tried to schedule teacher interviews so that several of the same teachers could be part of the classroom observations (see below).

In addition to topics addressed by school leader protocols, teacher interviews probed for relationships among teachers and between teachers and students, the school's learning environment, and the school's ability to serve all students well.

Students

Site visit teams completed two student focus groups per school. Students were taken from the classes of teacher interviewees, when possible, with one six-member group coming from one of the lowest-grade classes in the school and one from one of the highest-grade classes. Schools were asked to select from among the more heterogeneous of these classes. Selected classes were asked to take parent consent forms home for parent signature, and focus group students were selected from among those who returned signed forms. School coordinators were asked to select a mix of students by gender, racial/ethnic group, and native language status for each group.

In focus groups, students were asked to describe how their school is different from or similar to other schools, the nature of relationships among students and between students and teachers at the school, the nature of their schoolwork, and their assessment of how well the school is preparing them for life after graduation.

Classrooms

The site visit teams conducted four 25-minute observations in each school. Visitors sought to observe an English/language arts class and a mathematics class in one of the lower grades, an English/language arts class in one of the upper grades, and a class selected by school leaders to represent the best of their program. Where scheduling permitted, site visitors observed teachers who were in the interview samples. In all, observational data were collected in 19 classrooms in model schools, 34 classrooms in start-up schools, and 21 classrooms in high schools undergoing conversion.

Structured observation forms were used to code the structure of the instructional activity, teacher actions, and student actions. The instructional activity codes indicated how the teacher and students were grouped for teaching and learning—for example, whether the teacher was lecturing to the whole class, students were working individually, or students were working in small groups. Teacher action codes captured the role of the teacher within the activity, that is, whether the teacher was giving directions, posing questions, leading discussions, monitoring student work, and so on. Student action codes indicated what the observed students were doing, that is, whether students were listening, reading, collecting data, writing, performing, and so on. When site visitors saw more than one instructional activity (sequential or simultaneous) during the observation period, they rated each activity. In another section of the observation form, observers provided a narrative description of the activities they had observed. The form also required observers to note the instructional resources used and aspects of classroom management, such as the rough proportion of students who were "on task" during the activity. After the observations, visitors met with teachers to discuss what they saw. Observers asked teachers whether the work they observed was part of a long-term product and, if so, whether students were using rubrics to examine their work, whether students would have opportunities to revise their work, and whether students would have opportunities to apply what they had learned to real-world contexts.

During the analysis phase, the activity structure, teacher action, and student action codes were combined to provide a characterization of instruction related to the foundation's classroom attributes. Different combinations of codes were classified as:

- Traditional instructional methods.
- Active but still fairly traditional instruction (these activities, for example, might have had students practicing procedural skills—so learning was not passive—but did not encourage student inquiry or deep understanding).
- Active inquiry/in-depth learning.

Data for the three types of schools and three types of instruction are shown in Table A-11. A chi-square test of independence was calculated on these data, and differences were significant at $p < .05$.

Table A-11
Classroom Activity Ratings, by School Type and Instructional Method

	Percent of Activities		
Type of Instruction	**Preconversion/Conversion**	**Start-up**	**Model**
Traditional passive	61%	42%	38%
Traditional active	26%	41%	36%
Active inquiry/in-depth learning	13%	17%	26%
Number of observed classroom activities	31	45	31

QUALITATIVE DATA ANALYSIS

After returning from visits to schools and grantees, site visitors were responsible for organizing the data they had collected into a standard set of sections within data capture forms. For each type of interview, there was a form with a set of headings, organizing the data in a structure parallel to the flow of the interview protocol. In addition, a school summary form was used to capture more general or synthetic impressions. Site visitors completed the data capture forms on the basis of their notes, checking interview tapes when appropriate for clarification or to obtain exact wording for quotations. Conventions were used to indicate the source for each piece of information, to designate the speaker's exact words as opposed to paraphrases, and to separate data that came directly from the interview from inferences or clarifications provided by the site visitor. Senior analysts reviewed the data capture forms and requested clarifications and additions, as needed.

In preparation for data coding, we developed a manual of codes, definitions, and procedures. Codes were developed for the constructs in the foundation's theory of change, described in Chapter II. Codes were added to represent the additional constructs in our conceptual framework (described above) that the research literature suggests are important aspects of education reform. The code list also included tags for issues we expected to be salient on the basis of debriefing meetings held after our initial site visits.

There were 287 actively used codes in all, breaking down elements of vision, implementation tasks, attributes, outcomes, discussions of capital, and other categories important to the analysis. In addition, we used "meta-codes" to flag positive or negative evidence with respect to a construct's presence, useful quotations, vivid examples, and other common issues that would be useful for report writing. Exhibit A-1 shows an excerpt from the code list

Exhibit A-1
Excerpt from the Coding Manual

3.1			CLASSROOM ATTRIBUTES
3.1	.1		ACTIVE INQUIRY
3.1	.1	.1	Project-based learning
3.1	.1	.2	Student-directed learning
3.1	.1	.3	Teachers use student experience
3.1	.1	.4	Collaborative learning
3.1	.1	.99	Other active inquiry
3.1	.2		IN-DEPTH LEARNING
3.1	.2	.1	Deep exploration of a topic
3.1	.2	.2	Real-world problems
3.1	.2	.99	Other in-depth learning

We used ATLAS.ti software to support coding and analysis. The software allows chunks of data to be assigned one or more codes, which can then be queried to view all information related to a particular concept. It also supports distributed coding, with a merge feature to maintain a common database of all coded documents and related attributes.

Under the supervision of two senior analysts, a team of three coded all data capture forms. Training and reliability were supported by (1) a 3-day kickoff meeting in which coders learned the software and coding structure and worked together in pairs to negotiate coding decisions, and (2) ongoing weekly meetings among the coders in which issues and questions were discussed, code definitions were refined, and new codes were added to the common coding structure as needs emerged. Every 2 weeks, we selected a segment of a data capture form for double coding, comparing and discussing the results in the next coder meeting to test and improve coding reliability.

After coding was complete, qualitative data analysis began. Five analyst/coder teams each took responsibility for particular sets of constructs (e.g., normative climate or implementation tasks for new schools). Each construct in the conceptual framework was defined (using definitions from the foundation, the conceptual framework, and the research literature) and associated with particular ATLAS.ti codes, which were then queried to generate reports of relevant data. On the basis of the data and the research questions, analysts defined themes. Teams examined the coded data, created subcodes, and tabulated the numbers of informants speaking to the identified themes. Analysts created decision rules about the most credible informants and the numbers of informants needed to substantiate a theme or claim. Spreadsheets were used to track confirming and disconfirming evidence for possible assertions from the data for each school or grantee and, where triangulation was appropriate, each respondent. The analysis teams met weekly to standardize on guidelines for analysis and discuss emerging themes. As appropriate, coders added new codes and recoded data to reflect emerging understandings and correct any coding errors uncovered during analysis.

Analysts also triangulated the tabulated qualitative data with information collected from grantee documents, school demographic surveys, principal surveys, teacher surveys, student surveys, and classroom observations. Analysts looked for corroborative data and used multiple sources to support the findings reported in Chapters III, IV, and VI.

APPENDIX B

QUANTITATIVE TECHNICAL APPENDIX

DATA

The quantitative data presented in this report came from the spring 2002 principal, school demographic, teacher, and student surveys. The principal and school demographic surveys were personalized and printed in-house and mailed directly to principals or school leaders. Respondents were asked to return completed surveys to AIR, where staff entered the responses into a database. Twenty-one principal and 20 school demographic surveys were received. (See Table B-1 for complete response rate information.) A more involved process guided the administration of the teacher and student surveys.

A more involved process guided the administration of the teacher and student surveys. Research staff were assigned to each school and acted as a liaison between the school and the research team. A school employee was also recruited to serve as that school's survey coordinator. Prior to administering the survey, the coordinators provided teacher and student lists to the research team. With the help of the survey coordinator, the liaisons arranged administration dates for the teacher and student surveys.

Prior to administering any student survey, parents received a letter informing them about the pending survey and advising them of their rights to request that their child not participate. Each school or district determined how parental consent for student participation should be obtained. Most schools opted to have passive parental consent (i.e., parents were notified of the survey and asked to respond if they did not want their student to participate). However, some schools required active parental consent for student participation (i.e., parents had to return a permission slip stating that their child could participate). All schools administered the survey on a single date and then provided make-up sessions if a large proportion of students missed the main administration.

For the teacher surveys, many schools elected to give the surveys out on a single date, such as at a staff meeting. Other schools elected to distribute the surveys to teachers individually. In these cases, coordinators instructed teachers to return the surveys by a certain date.

NCS Pearson, the subcontractor who printed the surveys, received the completed surveys from the schools. These surveys were optically scanned into a database. If NCS Pearson received a survey for a student with a parental refusal, they deleted the record before forwarding the survey response files to AIR.

Table B-1
Survey Response Rates, by School

School	Grade Levels Served [a]	Principal Survey	School Demographic Survey	Teacher Response Rate (percent)	Student Response Rate (percent)	Included in Analysis
Models						
High Tech High San Diego	9-11	Y	Y	77.3	79.2	Y
Leadership High School	9-12	Y	Y	76.0	85.3	Y
Metropolitan Regional Career & Technical Center	9-12	Y	Y	100.0	79.6	Y
Minnesota New Country School	7-12[b]	Y	Y	91.7	68.1	Y
New Technology High School	11-12	Y	Y	90.0	76.3	Y
Start-ups						
Cedar Hill	9	Y	Y	100.0	69.2	Y
Del Monte	9-10	Y	Y	100.0	97.6	Y
DeSoto	9-12	Y	Y	82.8	79.1	Y
Freedom	9	Y	Y	50.0	80.4	Y
Green Gables	9-10	Y	Y	90.9	88.7	Y
Lakeshore	10	N	N	100.0	56.2	Y
Somerville	9	Y	Y	50.0	76.3	Y
Springtown	9-12	Y	Y	100.0	81.5	Y
Preconversions/Conversions						
Campbell	9-12	Y	Y	64.2	61.1	Y
Clearwater	9-12	Y	N	74.7	68.0	Y
Community	9-12	Y	Y	33.8	47.3	N
Hillside	9-12	Y	Y	96.9	61.6	Y
Logan	9-12	N	Y	64.3	63.7	Y
Morristown	9-12[c]	Y	Y	82.9	53.2	Y
Salazar	9-12	Y	Y	70.0	56.6	Y
Sullivan						
Academy #1	9-12	Y	N	40.0	34.9	N
Academy #2	9-12	Y	N	66.7	35.7	N
Academy #3	9-12	N	N	31.6	12.8	N
Von Humboldt	9-12[c]	Y	Y	84.8	69.0	Y
Western	9-12	Y	Y	98.7	78.6	Y

[a] These are the grade spans served by the schools at the time of the 2002 survey administration. Many schools have plans to add other grades in future years.

[b] Only students in grades 9-12 were surveyed.

[c] Only students in grades 9-11 were surveyed.

Three academies spawned from a converted school and one school that had constituted its ninth grade as a school within the larger school had to be dropped from the analysis because of extremely poor response rates on the teacher and student surveys. The average teacher and student response rates for these schools were 43.0% and 32.7%, respectively. With these schools removed, all of the large schools in the sample for analysis were in a preconversion state, and the average response rates for the schools included in the analysis were 83.1% for the teacher survey and 72.8% for the student survey.

This project's evaluation design includes three waves of annual data collection activities, with the spring 2002 administration being the first year. The start-up and preconversion schools analyzed in this report will be surveyed in subsequent years, while the model schools will not. The start-up schools will be surveyed in the spring of 2003 and 2004 to measure how they have progressed over time. The preconversion schools will be surveyed again in the spring of 2004, thus permitting comparisons of these schools before converting and after schools have had several years of experience in converting to smaller learning communities from comprehensive high schools. Additionally, a group of comparison schools not receiving funds from the Bill & Melinda Gates Foundation will be included in the third-wave data collection activities. These schools will enable comparisons of schools that do and do not adopt the smaller learning communities design.

METHODS

Data were analyzed in a multistep process that was guided by the evaluation's conceptual framework (see Chapter II and Appendix A). This section describes the statistical techniques used to develop the analyses reported in Chapter V. First, factor analysis was used to create scales measuring key constructs identified in our conceptual framework. Next, contrast codes were used to test for differences between school types in teacher and student background variables that were theorized to mediate responses to the reform. Hierarchical linear models (HLM) were employed to test for differences between preconversion, start-up, and model schools in the key constructs. Finally, school type means were calculated that controlled for teacher and student background variables. In addition, for the data presented from the demographic and principal surveys, analysis of variance (ANOVAs) and crosstabs were used.

Factor Analysis and Scale Construction

As part of the survey development process, each survey item was constructed to tap aspects of the conceptual framework constructs (such as high expectations or common focus). With this theoretical grouping of items, factor analyses were conducted on all items within each of these constructs to see if the individual items, or a subset of them, were related to a common latent construct. Once a factor was determined, Cronbach alphas were calculated to assess the internal consistency of the items used to measure the latent construct. As a general rule, factors with a Cronbach alpha above .70 were considered internally consistent and were used in the analysis.[20]

Once factors were identified, the individual items within each factor were averaged to create one scale for each construct. Before averaging, however, we addressed missing values. If a respondent was missing values for more than 50% of the items composing a factor, a scale value was not calculated for that respondent, and the respondent was assigned a missing value for that scale.

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[20] Three scales, based on student survey data, were analyzed that had alphas slightly below .70; Sense of Belonging had an alpha of .679, Positive Academic Self-Concept had an alpha of .694, and Community Resources had an alpha of .619.

Otherwise, the respondent's school mean was imputed for all missing survey items, and these values were averaged with the respondent's remaining survey items to create a scale value.

Exhibit B-1 details the individual items included in each of the scales used in the Chapter V analyses. Cronbach's alpha is also provided for each scale.

School Type Contrast Codes

To help answer the key research question guiding this report—whether there are differences between preconversion, start-up, and model schools—we designed contrast codes that allowed us to test two hypotheses:

- Preconversion schools differ from start-up and model schools.
- Start-ups (i.e., new small high schools) differ from models (i.e., preexisting small high schools).

The first hypothesis investigates whether small-school reform efforts relate to differences in key constructs, compared with the schools not yet reformed. The second hypothesis addresses whether or not the amount of time as a small school makes a difference. The contrast codes used in the analyses are coded as shown in Table B-2. Contrast 1 tests the first hypothesis, contrast 2 the second.

Table B-2
School Type Contrast Codes

	HLM Analyses			**Analysis of Variance (ANOVA)**		
	Pre-conversions	**Start-ups**	**Models**	**Pre-conversions**	**Start-ups**	**Models**
Contrast 1	0	1	1	-1	.5	.5
Contrast 2	0	-0.5	0.5	0	-1	1

Exhibit B-1
Survey Items Composing the Scales Measuring the Components of the Conceptual Framework

Measure Name	**Survey Items Included in Measure**	**Survey Respondent and Scale Reliability (Cronbach's Alpha)**
	ATTRIBUTES OF EFFECTIVE SCHOOLS	
	Normative Climate	
	High Expectations	
High Expectations	3. Now think about the TEACHERS you have had at this school. How much do you agree with the following statements about them? *Mark one number for each row.* The teachers I have had at this school . . . a. Believe that all students in this school can do well. b. Have given up on some of their students. *(reverse)* d. Care about only the smart students. *(reverse)* e. Expect very little from students. *(reverse)* f. Work hard to make sure that all students are learning. Response Scale: 1=Strongly disagree; 2=Disagree; 3=Agree; 4=Strongly agree	Student (.71)
High Expectations	14. How much would you agree or disagree with any of the following statements as descriptions of MOST of the teachers at YOUR SCHOOL? *Mark one number for each row.* Most teachers at this school . . . a. Set high standards for *teaching.* b. Set high standards for *all students' learning.* c. Make their expectations for meeting instructional goals clear to students. d. Carefully track students' academic progress. Response Scale: 1=Strongly disagree; 2=Disagree; 3=Agree; 4=Strongly agree	Teacher (.89)
	Personalization	
Personalization	2. Now think about ALL the TEACHERS and ALL the OTHER ADULTS in your school, including the principal, counselors, secretaries, librarians, and teacher aides. How many of these adults have done or would be willing to do the following this year? *Mark one number for each row.* How many of the adults in your school . . . a. Would be willing to give you extra help with your schoolwork if you needed it? b. Would be willing to help you with a personal problem? c. Really care about how well you are doing in school? d. Have helped you think about whether you are meeting the requirements for graduation? e. Have helped you think about what you need to do to prepare for college or for a career? Response Scale: 1=No adults; 2=One adult; 3=2 or 3 adults; 4=4 or 5 adults; 5=6 or more adults	Student (.84)

Exhibit B-1 (Continued)
Survey Items Composing the Scales Measuring the Components of the Conceptual Framework

Measure Name	**Survey Items Included in Measure**	**Survey Respondent and Scale Reliability (Cronbach's Alpha)**
	Personalization	
Personalization	4. Of the students in your school, please estimate the percentage for whom you know the following. *Mark one number for each row.* a. Their first and last names b. Their academic aspirations c. Their academic background prior to this year (e.g., they were held back a year) d. Their home life (e.g., family situations that may affect their learning) e. The names of the person/people with whom they live f. Who their friends are g. Their cultural and linguistic backgrounds Response Scale: 1=None; 2=1 to 25%; 3=26 to 50%; 4=51 to 75%; 5=More than 75%	Teacher (.93)
	Respect and Responsibility	
Respect and Responsibility	6. Now think about all the STUDENTS in your school. How much do you agree with the following statements about them? *Mark one number for each row.* b. Many students in this school don't respect one another. *(reverse)* c. There are groups of students in this school who don't get along. *(reverse)* Response Scale: 1=Strongly disagree; 2= Disagree; 3=Agree; 4=Strongly agree 7. Keep thinking about all the STUDENTS in your school. How many of them do you think are described by the following statements? *Mark one number for each row.* How many students in this school . . . c. Feel it's okay to make racist or sexist remarks? *(reverse)* d. Feel it's okay to cheat? *(reverse)* e. Feel it's okay to get into physical fights? *(reverse)* f. Feel it's okay to steal things from other students? *(reverse)* g. Feel it's okay to destroy or steal school property? *(reverse)* Response Scale: 1=None or almost none; 2=A few; 3=About half; 4=Most; 5=All or almost all	Student (.84)

Exhibit B-1 (Continued)
Survey Items Composing the Scales Measuring the Components of the Conceptual Framework

Measure Name	Survey Items Included in Measure	Survey Respondent and Scale Reliability (Cronbach's Alpha)
Respect and Responsibility	13. How much do you agree or disagree with the following statements about YOUR SCHOOL? *Mark one number for each row.* a. Teachers at this school feel good about parent(s)/guardian(s)' support of their work. d. Students treat one another with respect at this school. e. The relationship between students and teachers at this school is based on mutual trust and respect. g. Students at this school get teased if they take academics seriously. *(reverse)* Response Scale: 1=Strongly disagree; 2=Disagree; 3=Agree; 4=Strongly agree 15. To what extent do you agree with the following statements? *Mark one number for each row.* a. Student success or failure is due to factors beyond teachers' control. *(reverse)* c. I can usually get through to even the most difficult students. d. It is the responsibility of teachers to keep students from dropping out. e. Teaching makes a difference in students' lives. Response Scale: 1=Strongly disagree; 2=Disagree; 3=Agree; 4=Strongly agree	Teacher (.73)
	Safe and Orderly	
Safe	26. During this school year, how often have you felt unsafe in your school or in the surrounding neighborhood? *Mark one number for each row.* This school year, how often have you felt unsafe . . . a. In your classes? *(reverse)* b. In the hallways, stairs, and bathrooms? *(reverse)* c. Immediately outside the school? *(reverse)* Response Scale: 1=Never; 2=Once in a while; 3=Half the time; 4=Most of the time; 5=All the time	Student (.88)
Orderly	27. During this school year, how often have these things occurred in your school (either during the school day or before or after school)? *Mark one number for each row.* b. Fighting *(reverse)* c. Destroying property *(reverse)* d. Verbal bullying *(reverse)* e. Physical bullying *(reverse)* g. Cheating *(reverse)* h. Theft *(reverse)* Response Scale: 1=Never; 2=A few times this year; 3=Once or twice a month; 4=Once or twice a week; 5=Almost every day	Student (.91)

Exhibit B-1 (Continued)
Survey Items Composing the Scales Measuring the Components of the Conceptual Framework

Measure Name	**Survey Items Included in Measure**	**Survey Respondent and Scale Reliability (Cronbach's Alpha)**
Safe	22. During this school year, how often have you felt unsafe at school or in the surrounding neighborhood? _Mark one number for each row._ How often have you felt unsafe . . . a. In your classes? _(reverse)_ b. In the hallways, stairs, and bathrooms? _(reverse)_ c. Immediately outside the school? _(reverse)_ Response scale: 1=Never; 2=Once in a while; 3=Half the time; 4=Most of the time; 5=All the time	Teacher (.87)
Instructional Approaches		
Authentic Instruction		
Active Inquiry	29. In your _selected instructional period_*, how much emphasis do YOU place on engaging in the following activities? _Mark one number for each row._ i. Exploring topics that interest students j. Guiding student research and analysis Response Scale: 1=No emphasis; 2=Some emphasis; 3=Moderate emphasis; 4=Great emphasis 31. In your selected instructional period*, about how often do YOU do the following? Mark one number for each row. c. Monitor student-led discussions Response Scale: 1=Never; 2=A few times a year; 3=Once or twice a month; 4=Once or twice a week; 5=Almost every day 32. In your _selected instructional period_*, about how often do most of the STUDENTS do the following? _Mark one number for each row._ a. Collect, organize, and analyze information and data Response Scale: 1=Never; 2=A few times a year; 3=Once or twice a month; 4=Once or twice a week; 5=Almost every day 33. In your _selected instructional period_*, about how often do most of the STUDENTS do the following? _Mark one number for each row._ b. Decide how to present what they have learned c. Evaluate and defend their ideas or views Response Scale: 1=Never; 2= A few times a year; 3=Once or twice a month; 4=Once or twice a week; 5=Almost every day	Teacher (.77)

Exhibit B-1 (Continued)
Survey Items Composing the Scales Measuring the Components of the Conceptual Framework

Measure Name	Survey Items Included in Measure	Survey Respondent and Scale Reliability (Cronbach's Alpha)
In-Depth Learning	29. In your *selected instructional period**, how much emphasis do YOU place on engaging in the following activities? *Mark one number for each row.* a. Relating instructional content to real-life situations d. Helping students explore topics in depth Response Scale: 1=No emphasis; 2=Some emphasis; 3=Moderate emphasis; 4=Great emphasis 32. In your *selected instructional period**, about how often do most of the STUDENTS do the following? *Mark one number for each row.* d. Solve real-world problems Response Scale: 1=Never; 2=A few times a year; 3=Once or twice a month; 4=Once or twice a week; 5=Almost every day 33. In your *selected instructional period**, about how often do most of the STUDENTS do the following? *Mark one number for each row.* f. Research topics deeply enough to become subject-matter experts g. Work on multidisciplinary projects h. Participate in community- or work-based projects or internships Response Scale: 1=Never; 2= A few times a year; 3=Once or twice a month; 4=Once or twice a week; 5=Almost every day	Teacher (.70)
Performance Assessment	30. In *your selected instructional period**, about how often do you use the following methods to measure student performance? *Mark one number for each row.* d. Open-ended problems e. Portfolios of student work f. Group projects g. Individual projects h. Student peer reviews i. Hands-on demonstrations, exhibitions, or oral presentations j. Performance assessments Response Scale: 1=Never; 2=A few times a year; 3=Once or twice a month; 4=Once or twice a week; 5=Almost every day	Teacher (.80)
	Technology as a Tool	
Use of Technology in Classroom Instruction	34. This question focuses on technology and how you use it in your teaching. In your *selected instructional period**, about how often do YOUR STUDENTS use technology (e.g., computers, Internet) for each of these purposes? *Mark one number for each row.* d. Expressing themselves in writing e. Communicating electronically about academic subjects (e.g., with experts, authors, or other teacher and/or students) f. Exploring ideas and information h. Analyzing information i. Presenting information to an audience j. Improving computer skills Response Scale: 1=Never; 2=A few times a year; 3=Once or twice a month; 4=Once or twice a week; 5=Almost every day	Teacher (.90)

Exhibit B-1 (Continued)
Survey Items Composing the Scales Measuring the Components of the Conceptual Framework

Measure Name	**Survey Items Included in Measure**	**Survey Respondent and Scale Reliability (Cronbach's Alpha)**
	Traditional Instruction	
Use of Traditional Instruction Techniques	29. In your *selected instructional period**, how much emphasis do YOU place on engaging in the following activities? *Mark one number for each row.* b. Helping students learn algorithms, procedures, and facts c. Helping students strengthen basic reading and mathematics skills Response Scale: 1=No emphasis; 2=Some emphasis; 3=Moderate emphasis; 4=Great emphasis 31. In your selected instructional period*, about how often do YOU do the following? Mark one number for each row. a. Lecture to the class as a whole e. Lead practices on basic facts, definitions, computations, skills, or procedures Response Scale: 1=Never; 2=A few times a year; 3=Once or twice a month; 4=Once or twice a week; 5=Almost every day 32. In your *selected instructional period**, about how often do most of the STUDENTS do the following? *Mark one number for each row.* c. Practice computations, procedures, or skills e. Memorize facts, definitions, or formulas Response Scale: 1=Never; 2=A few times a year; 3=Once or twice a month; 4=Once or twice a week; 5=Almost every day	Teacher (.72)
	Standardized Test Preparation	
Preparing Students for Standardized Tests	29. In your *selected instructional period**, how much emphasis do YOU place on engaging in the following activities? *Mark one number for each row.* f. Covering material in the state and district content standards g. Covering material on state and district tests h. Testing students Response Scale: 1=No emphasis; 2=Some emphasis; 3=Moderate emphasis; 4=Great emphasis 30. In *your selected instructional period**, about how often do you use the following methods to measure student performance? *Mark one number for each row.* a. Multiple-choice tests b. Short-answer tests Response Scale: 1=Never; 2=A few times a year; 3=Once or twice a month; 4=Once or twice a week; 5=Almost every day 32. In your *selected instructional period**, about how often do most of the STUDENTS do the following? *Mark one number for each row.* h. Prepare for district or state tests Response Scale: 1=Never; 2=A few times a year; 3=Once or twice a month; 4=Once or twice a week; 5=Almost every day	Teacher (.77)

Exhibit B-1 (Continued)
Survey Items Composing the Scales Measuring the Components of the Conceptual Framework

Measure Name	Survey Items Included in Measure	Survey Respondent and Scale Reliability (Cronbach's Alpha)
	34. This question focuses on technology and how you use it in your teaching. In your *selected instructional period**, about how often do YOUR STUDENTS use technology (e.g., computers, Internet) for each of these purposes? *Mark one number for each row.* c. Preparing to take standardized tests Response Scale: 1=Never; 2=A few times a year; 3=Once or twice a month; 4=Once or twice a week; 5=Almost every day	
	Teacher Professional Community	
Common Focus	12. Indicate whether you agree or disagree with the following statements about YOUR SCHOOL. *Mark one number for each row.* a. Most teachers in this school have very different visions for student learning. *(reverse)* c. Most teachers in this school share my beliefs and values about what the central mission of the school should be. d. Most teachers in this school are committed to developing strong relationships with students. e. Most teachers in this school are committed to developing partnerships with parent(s)/guardian(s) for student learning. f. In general, parent(s)/guardian(s) and other community members do not share a focused vision for student learning. *(reverse)* Response Scale: 1=Strongly disagree; 2=Disagree; 3=Agree; 4=Strongly agree	Teacher (.77)
Collegiality	13. How much do you agree or disagree with the following statements about YOUR SCHOOL? *Mark one number for each row.* b. At this school, teachers really don't support each other or work together. *(reverse)* c. Teachers at this school trust and respect one another. f. The teachers, administrators, and other staff at this school model responsible behavior for the students to see. Response Scale: 1=Strongly disagree; 2=Disagree; 3=Agree; 4=Strongly agree	Teacher (.79)
Collaboration	2. Since the beginning of the school year, how many times have you engaged in the following activities with other teachers either formally or informally? *Mark one number for each row in Column A. [The question then asks teachers to indicate in Column B how much the activities they engaged in improved their teaching practice.]* c. Observing other teachers while they teach d. Being observed by other teachers while you teach f. Receiving feedback from other teachers based on their observations of your teaching g. Providing feedback to other teachers based on your observations of their teaching h. Co-teaching with other teachers i. Diagnosing individual students' learning with other teachers (e.g., discussing specific students and arranging appropriate help) Response Scale: Number of Times: 1=None; 2=1 to 4 times; 3=5 to 9 times; 4=10 or more times	Teacher (.80)

Exhibit B-1 (Continued)
Survey Items Composing the Scales Measuring the Components of the Conceptual Framework

Measure Name	**Survey Items Included in Measure**	**Survey Respondent and Scale Reliability (Cronbach's Alpha)**
Reflective Professional Dialogue	1. Since the beginning of the school year, how often have you met formally or informally with other teachers at YOUR SCHOOL to discuss each of the following topics? *Mark one number for each row.* a. The goals of this school b. The structure of the school day (e.g., block scheduling, common planning time) c. Development of new curricula or modification of existing curricula d. Teaching practices or instructional issues e. General classroom administration and management Response Scale: 1=Never; 2=A few times a year; 3=Once or twice a month; 4=Once or twice a week; 5=Almost every day	Teacher (.87)
School Governance		
School decision-making	16. For each kind of decision listed below, please indicate the amount of input or influence that YOU have in the decision-making process affecting this current school year. *Mark one number for each row.* a. Deciding on student discipline procedures c. Selecting the content of professional development activities d. Choosing school programs or reforms e. Establishing or improving the curriculum f. Establishing or improving schoolwide or gradewide assessments g. Hiring professional staff Response Scale: 1=No influence; 2=Little influence; 3=Moderate influence; 4=Heavy influence	Teacher (.88)
Classroom decision-making	36. In relation only to your *selected instructional period* (i.e., not all of your current teaching assignments)*, indicate the amount of input or influence that YOU had in the process for making each kind of decision. *Mark one number for each row.* a. Determining goals and objectives for student learning b. Deciding how to assess student learning c. Selecting the content, topics, and skills to be covered d. Selecting specific textbook(s) or materials to be used e. Selecting the sequence in which topics are covered f. Setting the pace for covering topics g. Selecting teaching techniques h. Determining student discipline procedures Response Scale: 1=No influence; 2=Little influence; 3=Moderate influence; 4=Heavy influence	Teacher (.88)

Exhibit B-1 (Continued)
Survey Items Composing the Scales Measuring the Components of the Conceptual Framework

Measure Name	**Survey Items Included in Measure**	**Survey Respondent and Scale Reliability (Cronbach's Alpha)**
Multidirectional Communication	19. Please indicate whether you agree or disagree with the following statements. Mark one number for each row. If you have too little information to make a judgment, mark DK for do not know. e. The principal is a good person to talk to about how to solve problems. f. When I talk to my principal, I feel as though I am dealing with a boss rather than with a colleague. *(reverse)* g. The principal in this school really listens to teachers. h. The principal is usually available to talk with me. Response Scale: DK=Do not know; 1=Strongly disagree; 2=Disagree; 3=Agree; 4=Strongly agree 20. Indicate your level of agreement with the following statements. *Mark one number for each row.* a. The principal encourages teachers to express their opinions without fear of criticism or retaliation. e. You really have to be careful about what you say and to whom you talk in this school. *(reverse)* Response Scale: 1=Strongly disagree; 2=Disagree; 3=Agree; 4=Strongly agree	Teacher (.87)
	Academic Organization	
Instructional Coherence	18. How much do you agree with the following statements as descriptions of YOUR SCHOOL during the current school? *Mark one number for each row.* a. School-sponsored support programs (e.g., tutoring, parent education) are linked to the curriculum, instruction, and assessments. b. Professional development for staff supports the implementation of a set common curricula, instructional strategies, and assessments. c. Curricula are coordinated at this school to avoid repeating subject matter with students as they move from grade to grade. e. I am very familiar with the curricula and instructional strategies used by colleagues *who are also teaching my students* in subject areas other than my own. f. Teachers in this school have adequate opportunity to meet with one another. Response Scale: 1=Strongly disagree; 2=Disagree; 3=Agree; 4=Strongly agree	Teacher (.71)
	SUPPORTS FOR EFFECTIVE SCHOOLS	
	Human and Material Capital	
Teacher Preparedness	37. How well prepared do you feel to do the following activities? *Mark one number for each row.* a. Implement methods of teaching new to you b. Implement state or district curriculum and performance standards c. Integrate technology into your subject d. Use student performance assessments (e.g., portfolios, exhibitions, or competency tasks) Response Scale: 1=Not at all prepared; 2=Somewhat prepared; 3=Moderately prepared; 4=Very well prepared	Teacher (.73)

Exhibit B-1 (Continued)
Survey Items Composing the Scales Measuring the Components of the Conceptual Framework

Measure Name	Survey Items Included in Measure	Survey Respondent and Scale Reliability (Cronbach's Alpha)
School Leadership	19. Please indicate whether you agree or disagree with the following statements. Mark one number for each row. If you have too little information to make a judgment, mark DK for do not know. a. The principal at this school is good at getting resources. b. The principal deals with outside pressures well. c. The principal makes plans and carries them out. d. The principal is aware of the problems faced by staff. Response Scale: DK=Do not know; 1=Strongly disagree; 2=Disagree; 3=Agree; 4=Strongly agree 20. Indicate your level of agreement with the following statements. *Mark one number for each row.* c. The principal articulates a clear vision for the school. f. The rules for student behavior are enforced in this school. Response Scale: 1=Strongly disagree; 2=Disagree; 3=Agree; 4=Strongly agree	Teacher (.89)
Parental Involvement	7. Since the beginning of the school year, about how often have YOU engaged in any of the following activities? *Mark one number for each row.* a. Involved parent(s)/guardian(s) in setting up particular learning objectives for the student b. Involved parent(s)/guardian(s) in judging student work c. Provided parent(s)/guardian(s) with exemplars of excellent student work to demonstrate standards for good performance d. Involved parent(s)/guardian(s) as mentors for individual students or groups of students Response Scale: 1=Never; 2=A few times a year; 3=Once or twice a month; 4=Once or twice a week; 5=Almost every day	Teacher (.79)
	Material Capital	
Instructional Materials	9. During this school year, how often have the following kinds of materials been available to you when you needed them? *Mark one number for each row. For materials that you do not use, mark NA for not applicable.* b. Technology (e.g., audio visual equipment, computers, Internet access) e. Textbooks f. Supplementary textbook materials g. Test score data h. Copies of the standards that your school uses j. Library materials for your use (e.g., reference books) Response Scale: NA=Not applicable; 1=Almost never available; 2=Sometimes available; 3=Usually available; 4=Almost always available	Teacher (.79)

Exhibit B-1 (Continued)
Survey Items Composing the Scales Measuring the Components of the Conceptual Framework

Measure Name	Survey Items Included in Measure	Survey Respondent and Scale Reliability (Cronbach's Alpha)
Instructional Resources	10. During this school year, have any of the following kinds of specialist resources been available to you onsite (i.e., in your school)? *Mark one number for each row. For resources that you do not use, mark NA for not applicable.* a. Classroom aides for instruction b. Subject matter specialist(s) c. Reading specialist d. Special education resource teacher(s) e. Bilingual teacher (s) f. School psychologist/social worker g. Parent liaison h. Translator(s) for languages spoken by families Response Scale: NA=Not applicable; 1=Never available onsite; 2= Sometimes available onsite; 3=Usually available onsite; 4=Always available onsite	Teacher (.83)
INTERMEDIATE STUDENT OUTCOMES		
Social Capital		
Community Resources	7. Since the beginning of this school year, about how often have YOU engaged in any of the following activities? Mark one number for each row. h. Consulted with members of the community to better understand your students Response Scale: 1=Never; 2=A few times a year; 3=Once or twice a month; 4=Once or twice a week; 5=Almost every day 35. During the current school year, in your selected instructional period, about how frequently have YOU done any of the following? Mark one number for each row. a. Brought in a guest speaker from the school's community b. Discussed the different cultures in your community with your students c. Taken students to visit places or organizations in the community Response Scale: 1=Never; 2=A few times a year; 3=Once or twice a month; 4=Once or twice a week; 5=Almost every day	Teacher (.62)
Academic Self-Concept		
Positive Academic Self-Concept	21. How much do you agree with the following statements about yourself? *Mark one number for each row.* I am good at . . . a. Asking teachers for help when I get stuck on schoolwork. b. Working in a group with other students. c. Taking part in class or group discussions. d. Understanding what I have read. f. Writing papers or stories. g. Learning math. Response Scale: 1=Strongly disagree; 2=Disagree; 3=Agree; 4=Strongly agree	Student (.69)

Exhibit B-1 (Continued)
Survey Items Composing the Scales Measuring the Components of the Conceptual Framework

Measure Name	**Survey Items Included in Measure**	**Survey Respondent and Scale Reliability (Cronbach's Alpha)**
Engagement		
Interest	22. During this school year, about how often have you done the following? *Mark one number for each row.* This school year, I have . . . a. Talked to my family about what I am working on in school. b. Asked my friends for advice about something I am working on in school. c. Asked questions in class or contributed to class discussions. e. Worked with classmates outside of class or school on schoolwork. f. Asked my teachers to meet with me to talk about grades, assignments, or my work on projects. Response Scale: 1=Never; 2=A few times this year; 3=Once or twice a month; 4=Once or twice a week; 5=Almost every day	Student (.75)
Persistence	18. During this school year, how often did the following things happen while you were doing your schoolwork? *Mark one number for each row.* a. I got frustrated and gave up when my schoolwork became too hard. *(reverse)* b. When my schoolwork became difficult, I found a way to get help. c. I gave extra effort to challenging assignments or projects. d. I kept trying to do well on my schoolwork even when it wasn't interesting to me. Response Scale: 1=Never; 2=Once in a while; 3=Half the time; 4=Most of the time; 5=All the time 20. During this school year, how often did the following things happen while you were doing your schoolwork? *Mark one number for each row.* a. I tried really hard to do a good job. b. I really found my schoolwork interesting. c. I really did not care too much about my schoolwork. *(reverse)* Response Scale: 1=Never; 2=Once in a while; 3=Half the time; 4= Most of the time; 5=All the time	Student (.76)
Sense of Belonging		
Sense of Belonging	25. How much do you agree with the following statements? *Mark one number for each row.* a. I feel like I am a real part of this school. b. I don't fit in with most of the other students in this school. *(reverse)* c. I participate in a lot of activities in this school. d. People at this school are like family to me. e. I feel like an outsider at this school. *(reverse)* Response Scale: 1=Strongly disagree; 2=Disagree; 3=Agree; 4=Strongly agree	Student (.68)

Exhibit B-1 (Continued)
Survey items Composing the Scales Measuring the Components of the Conceptual Framework

Measure Name	**Survey Items Included in Measure**	**Survey Respondent and Scale Reliability (Cronbach's Alpha)**
Academic Progress	28. How well do you think your school has taught you the following? *Mark one number for each row.* How well has your school taught you to . . . a. Be a good reader? b. Speak clearly and effectively? c. Write clearly and effectively? d. Analyze and solve math problems? e. Learn effectively on your own with little help from others? Response Scale: 1=Poor job; 2=OK job; 3=Pretty good job; 4=Excellent job	Student (.84)
Social Responsibility	28. How well do you think your school has taught you the following? *Mark one number for each row.* How well has your school taught you to . . . g. Be a responsible member of your community? h. Understand the rights and responsibilities of people living in the United States? i. Respect the opinions of people from different backgrounds? j. Prepare for the work world or attending college? l. Think critically about ideas, problems, and current events? Response Scale: 1=Poor job; 2=OK job; 3=Pretty good job; 4=Excellent job	Student (.86)

*The Spring 2002 teacher survey defined *selected instructional period* as follows: To answer the questions in this section [Part III. Your Teaching], please select and describe your first teaching period of the week (e.g., if your school has formal class periods, please describe your first class; if your school does not have formal class periods, please describe your first advisory session). This first teaching period of the week will be referred to as your "selected instructional period" in the questions that appear in this section.

Analysis of Variance (ANOVA)

Because of the small number of schools, there were very few principal surveys (n=19).[21] As a result, there was limited power for statistical analysis. For this reason, factor analyses were not calculated for the principal items. Instead, items that relate to a particular construct are reported individually. An analysis of variance (ANOVA) was conducted for each survey item. Contrasts were included in the ANOVAs to indicate which school type means differed from each other (see Exhibit B-1 above).

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[21] Principals at 2 of the 21 schools included in the analyses in Chapter V did not return a survey.

Hierarchical Linear Models

Many of the analyses in Chapter V used hierarchical linear models (HLM) to account for the fact that teachers and students are nested within schools. This nesting, or grouping, suggests that there are some factors that will affect them in similar ways because they all exist within a shared environment. For example, these factors could be things related to the school building (e.g., adequacy of its size, presence of sufficient administrative staff) or the school community (e.g., location in a high-poverty area).

The teacher model (see Exhibit B-2), used to examine all constructs measured at the teacher level (T_{ij}), has teachers (the *i*'s) nested within schools (the *j*'s). The model controls for several teacher characteristics at level 1 (i.e., teacher level) that may influence how they respond to survey questions measuring constructs such as respect and responsibility and school leadership. The teacher model does not control for variation in between-school differences in student composition. The teacher characteristics controlled for are:

- *Subject taught* ($Read_{ij}$, $Math_{ij}$, $Science_{ij}$, $Social_{ij}$, $Multi_{ij}$): All teachers were assigned to one of six mutually exclusive subject categories based on their response to a survey item that allowed them to check "all that apply." Teachers who indicated that they taught multiple subjects or had "no primary affiliation with a single subject (e.g., self-contained classroom)" were grouped together in the *multiple subjects* category. Teachers who indicated that they taught art/music, a vocational field, health/physical education, special education, English as a second language, computer or technology, or other were assigned to the *nonacademic subjects* category. This is the reference category in the model.

- *Educational attainment* ($GradDeg_{ij}$): This dummy variable compares teachers with advanced degrees to teachers without. An advanced degree is considered to be a master's degree, education specialist or professional diploma, or doctorate or first professional degree.

- *Professional certification* ($Certification_{ij}$): This dummy variable compares teachers with National Board for Professional Teaching Standards Certification, regular or standard state or advanced professional certificate, or probationary certificate (the initial certificate issued after satisfying all requirements except the completion of a probationary period) to teachers with all other types of certification.

- *Teaching experience* ($Years_{ij}$): Teaching experience is measured by the number of years the teacher worked as either a half-time or full-time elementary or secondary teacher.

Exhibit B-2
Teacher HLM Model

Level 1:

$$T_{ij} = \beta_{0j} + \beta_{1j}\boldsymbol{\mathit{Read}}_{ij} + \beta_{2j}\boldsymbol{\mathit{Math}}_{ij} + \beta_{3j}\boldsymbol{\mathit{Science}}_{ij} + \beta_{4j}\boldsymbol{\mathit{Social}}_{ij} + \beta_{5j}\boldsymbol{\mathit{Multi}}_{ij} + \beta_{6j}\boldsymbol{\mathit{GradDeg}}_{ij} + \beta_{7j}\boldsymbol{\mathit{Certification}}_{ij} + \beta_{8j}\boldsymbol{\mathit{Years}}_{ij} + r_{ij}$$

Level 2:

$$\beta_{0j} = \gamma_{00} + \gamma_{01}\mathrm{Contrast1}_{0j} + \gamma_{02}\mathrm{Contrast2}_{0j} + u_{0j}$$
$$\beta_{1j} = \gamma_{10}$$
$$\beta_{2j} = \gamma_{20}$$
$$\beta_{3j} = \gamma_{30}$$
$$\beta_{4j} = \gamma_{40}$$
$$\beta_{5j} = \gamma_{50}$$
$$\beta_{6j} = \gamma_{60}$$
$$\beta_{7j} = \gamma_{70}$$
$$\beta_{8j} = \gamma_{80}$$

NOTE: Variables in ***bold italics*** are grand-mean centered; others are in their natural metric.

The student model (see Exhibit B-3), used to examine all constructs measured at the student level (S_{ij}), has students (the *i*'s) nested within schools (the *j*'s).[22] The model controls for several student background factors at level 1 (student level) that may influence how they respond to survey questions measuring constructs such as their sense of belonging to the school and their engagement in their education. These factors are:

- *Race/Ethnicity* (Asian_{ij}, $\mathrm{Hispanic}_{ij}$, Black_{ij}, Other_{ij}): All students were assigned to one of five mutually exclusive dummy variables representing race/ethnicity. These are based on a survey item that allowed respondents to select "all that apply." Students who checked Hispanic were classified as *Hispanic* even if they also marked one or more races. Students who indicated that their heritage was of more than one race, but not Hispanic ethnicity, were grouped in the *other/multiracial* category along with those students who indicated that they were American Indian or Alaska Native. Students who stated they were Asian or Native Hawaiian or Pacific Islander were grouped together in the *Asian* category. *White* is the reference category.

- *Mother's educational attainment (*MomHS_{ij}, MomBA_{ij}*):* These dummy variables compare students whose mother did not attend school beyond high school and those whose mother completed at least some postsecondary education to those who "do not know" their mother's educational attainment. For students who either did not respond to this survey item or stated that they did not know, we imputed their response to an identical question about their father's educational attainment. If students did not know their mother's or their father's educational attainment, their response was coded as "do not know."

- English language exposure ($\mathrm{NonEnglish}_{ij}$): This dummy variable compares students who stated that a language other than English was spoken at home for any amount of time with those for whom English was the sole language spoken at home.

- *Gender* (Female_{ij}*):* This dummy variable compares females with males.

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[22] A three-level model with students nested within teachers nested within schools was not possible because students were not linked to a specific teacher teaching a specific subject.

- *Grade level* (Grade_{ij}): This continuous variable represents the grade in which the student is enrolled. It is coded 0 for 9th grade, 1 for 10th grade, 2 for 11th grade, and 3 for 12th grade.

Exhibit B-3
Student HLM Model

Level 1:

$$S_{ij} = \beta_{0j} + \beta_{1j}\boldsymbol{MomHS}_{ij} + \beta_{2j}\boldsymbol{MomBA}_{ij} + \beta_{3j}\boldsymbol{Asian}_{ij} + \beta_{4j}\boldsymbol{Hispanic}_{ij} + \beta_{5j}\boldsymbol{Black}_{ij} + \beta_{6j}\boldsymbol{Other}_{ij} + \beta_{7j}\boldsymbol{NonEnglish}_{ij} + \beta_{8j}\boldsymbol{Female}_{ij} + \beta_{9j}\boldsymbol{Grade}_{ij} + r_{ij}$$

Level 2:

$$\beta_{0j} = \gamma_{00} + \gamma_{01}\text{Contrast1}_{0j} + \gamma_{02}\text{Contrast2}_{0j} + u_{0j}$$

$$\beta_{1j} = \gamma_{10}$$

$$\beta_{2j} = \gamma_{20}$$

$$\beta_{3j} = \gamma_{30}$$

$$\beta_{4j} = \gamma_{40}$$

$$\beta_{5j} = \gamma_{50}$$

$$\beta_{6j} = \gamma_{60}$$

$$\beta_{7j} = \gamma_{70}$$

$$\beta_{8j} = \gamma_{80}$$

$$\beta_{9j} = \gamma_{90}$$

NOTE: Variables in ***bold italics*** are grand-mean centered; others are in their natural metric.

In both HLM models, all level 1 predictors (e.g., teacher years of experience, student race/ethnicity) were grand-mean centered, meaning that the population mean for a given variable was subtracted from each level 1 unit's (i.e., teacher's or student's) value for that variable. This linear transformation, while not changing the standard error estimates, significance test results, or the variance partitioning, provides great assistance in the interpretation of the intercept. Because each predictor is centered on the population mean, the zero value represents a school with the average value for that predictor. For example, in the teacher model with high expectations as the dependent variable, the intercept is degree to which teachers have high expectations for students at a school with the population mean percentage of teachers teaching in each subject; percentage of teachers with an advanced degree; percentage of teachers holding a regular state, national, or probationary certification; and teacher experience. In shorthand, the intercept can be said to be the value at the "average school."

Including predictors at level 1 helps control for differences across schools in student and teacher backgrounds. The coefficient estimates of the level 1 predictors are weighted averages of the within-school (or individual) effect and the between-school effect.[23] The weights are the precisions of each effect. It is not possible to separate the level 1 predictor coefficients into the within- and between-school effects. This requires that the group aggregates for the level 1 predictors be included at level 2 (for example, an individual student's gender included at level 1 and the school's percent female at level 2). However, the small number of schools available for analysis constrained the number of level 2 predictors that could be included.[24]

The central component to both HLM models is the level 2 equation (i.e., school level) for the intercept, below as equation B.1, which explores differences across the three school types.

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[23] The between-school effect is the sum of the individual effect and the level 2 group composition effect.

[24] For a detailed discussion of how grand-mean centered level 1 predictors control for a combination of the within- and between-school effects, see Raudenbush and Bryk (2002), pp. 134-149.

Eq. B.1 $\beta_{0j} = \gamma_{00} + \gamma_{01}\text{Contrast1}_{0j} + \gamma_{02}\text{Contrast2}_{0j} + u_{0j}$

This equation estimates the average effect for start-up and model schools on how teachers or students view various attributes of effective schools (e.g., personalization, active inquiry, etc.) controlling for the teacher or student background variables included at level 1. For example, assume that the dependent variable is the teacher measure for high expectations. β_{0j} is the mean teacher-reported value for high expectations in school *j*. It is a function of the grand mean (γ_{00}) of all teachers in the preconversion schools, the additional effect of the school's being a small learning community (γ_{01}), the additional effect of being either a start-up or model school (γ_{02}), and the unique effect of school *j* (u_{0j}). If the coefficient for the first contrast code is statistically significant, this indicates that there is a difference in the outcome variable (in this example, high expectations) between the small schools (start-ups and models combined) and preconversions. If the coefficient for the second contrast code is statistically significant, there is a difference in the outcome variable between start-ups and model schools.

Each HLM model also has a complex error term that separates the unexplained variance in the dependent variable into two components: between-school variance (u_{0j}) and within-school variance (r_{ij}). The analysis presented in this report is especially interested in the amount of between-school variance explained by the school type contrast codes. To measure this, several additional statistics, called intraclass correlation coefficients (ICCs), were calculated that represent the percentage of the total variance that is between-school. An ICC is calculated by dividing the between-school variance by the total variance, or:

Eq. B.2 ICC = tau / (tau + sigma)

The first ICC calculated is the fully unconditional ICC based on a model without any level 1 predictors (e.g., teacher subject, student race) or level 2 predictors (e.g., school type contrast codes). The second is the ICC based on a model that controls for school composition using individual level teacher or student characteristics (e.g., the level 1 predictors). The third is the ICC based on the full model that adds the school type predictors to the within-school model. Dividing the difference between the ICC for the model including individual student or teacher predictors and the full model ICC by the ICC for the model including individual predictors calculates the percentage of between-school variance explained by school type.

Calculating School Type Means

Throughout Chapter V, school type means are reported to illustrate how attributes of effective schools, supports for those attributes, and the intermediate student outcomes vary across preconversion, start-up, and model schools. These means were calculated by simply plugging results from the HLM model and the values for the contrast codes into the equation for the level 2 intercept (equation B.1 above). This results in the following equations:

Eq. B.3 $\text{Preconversions} = \gamma 00 + (\gamma 01)(0) + (\gamma 02)(0)$

Eq. B.4 $\text{Start-ups} = \gamma 00 + (\gamma 01)(1) + (\gamma 02)(-0.5)$

Eq. B.5 $\text{Models} = \gamma 00 + (\gamma 01)(1) + (\gamma 02)(0.5)$

These means can be interpreted in standard deviation units because all dependent variables were converted to z-scores (N(0,1)). The means represent schools with average values for all level 1 predictors because teacher and student background variables were grand-mean centered (i.e., the values for the entire sample were linearly transformed by subtracting the population mean from each observation).

Results

This section presents the findings in tabular form. These results were used to create the graphic displays that appear in Chapter V. The figures are organized by the Chapter V subheadings to which they apply.

Differences in Teacher and Student Background Variables between School Types

Tables B-3 and B-4 provide simple means and standard deviations for all variables included in the analysis. The statistics provided in Tables B-3 and B-4 do not control for any of the background variables.

Table B-3
Means and Standard Deviations of Teacher Construct Variables, by School Type

Variable	Preconversion			Start-up			Model		
	N	*Mean*	*Std Dev*	*N*	*Mean*	*Std Dev*	*N*	*Mean*	*Std Dev*
Attributes of Effective Schools									
High Expectations	516	-0.14	0.95	77	0.38	1.05	62	0.69	0.95
Personalization	511	-0.25	0.81	72	1.08	0.94	59	0.88	1.16
Respect and Responsibility	517	-0.22	0.91	77	0.58	0.86	62	1.10	0.88
Safe	519	-0.07	1.06	77	0.13	0.87	63	0.39	0.35
In-Depth Learning	510	-0.13	0.95	74	0.23	0.96	62	0.79	1.07
Performance Assessment	509	-0.06	0.99	73	0.21	0.96	63	0.26	1.03
Technology as a Tool	505	-0.16	0.94	73	0.31	0.91	61	0.93	0.99
Traditional Instruction	512	0.11	0.96	74	-0.42	1.10	63	-0.40	0.95
Standardized Test Preparation	512	0.20	0.93	73	-0.64	0.95	63	-0.90	0.78
Common Focus	517	-0.21	0.92	77	0.73	0.91	62	0.87	0.88
Collegiality	514	-0.15	0.94	77	0.50	1.06	62	0.62	1.01
Time to Collaborate	518	-0.21	0.86	76	0.63	1.14	62	0.96	1.08
Reflective Professional Dialogue	517	-0.22	0.94	77	0.91	0.85	63	0.70	0.67
Supports for Effective Schools									
School Decision-making	519	-0.28	0.80	77	1.12	0.98	63	0.95	1.01
Classroom Decision-making	511	-0.09	1.00	74	0.38	0.88	62	0.30	0.99
Multidirectional Communication	504	-0.13	0.94	73	0.66	1.06	61	0.32	1.04
Coherence	518	-0.22	0.89	76	0.74	1.02	63	0.89	0.90
Teacher Preparedness	516	-0.08	1.00	75	0.27	0.91	63	0.33	1.00
School Leadership	498	-0.11	1.00	73	0.47	0.98	60	0.30	0.81
Parental Involvement	517	-0.11	0.96	76	0.13	0.95	61	0.74	1.05
Instructional Materials	512	0.02	0.98	74	-0.12	1.03	59	-0.02	1.10
Instructional Resources	459	-0.03	1.02	68	0.25	0.95	53	-0.06	0.79
Community Resources	514	-0.12	0.95	74	0.35	0.93	63	0.60	1.17

Source: Teacher survey, spring 2002.

Table B-4
Means and Standard Deviations of Student Construct Variables by, School Type

Variable	Preconversion			Start-up			Model		
	N	***Mean***	***Std Dev***	***N***	***Mean***	***Std Dev***	***N***	***Mean***	***Std Dev***
Attributes of Effective Schools									
High Expectations	5257	-0.15	0.96	708	0.58	0.95	682	0.55	0.93
Personalization	5094	-0.10	0.98	687	0.34	0.99	664	0.44	0.98
Respect and Responsibility	5242	-0.17	0.95	700	0.60	0.91	677	0.72	0.92
Safe	5229	-0.04	1.02	699	0.04	0.96	680	0.27	0.80
Orderly	5230	-0.15	1.01	698	0.56	0.76	684	0.59	0.70
Active Inquiry	5235	-0.10	0.98	704	0.36	1.03	676	0.43	0.94
In-Depth Learning	5262	-0.14	0.96	710	0.44	1.00	677	0.64	0.93
Performance Assessment	5208	-0.09	0.98	702	0.33	1.02	670	0.39	0.98
Intermediate Student Outcomes									
Academic Self-Concept	5248	-0.05	1.00	706	0.12	0.95	680	0.28	1.01
Engagement									
Interest	5243	-0.10	0.99	705	0.32	0.98	678	0.44	0.94
Persistence	5243	-0.09	1.00	703	0.31	0.91	675	0.36	0.94
Sense of Belonging	5228	-0.10	0.98	698	0.39	0.93	679	0.38	1.02
Satisfaction									
Academic Progress	5233	-0.07	0.99	702	0.20	0.95	681	0.35	1.01
Social Responsibility	5215	-0.11	0.98	698	0.31	0.91	679	0.55	0.96

Source: Student survey, spring 2002.

Are there differences between model, start-up, and preconversion high schools on the key attributes of effective schools identified by the foundation?

Table B-5 presents school type means and between-school variance figures for teacher- and student-reported constructs that address attributes of effective schools. Table B-6 contains results for principal-reported data on survey items relating to attributes of effective schools.

Do these schools differ on features that are expected to promote the implementation of the attributes?

Tables B-7 and B-8 present the school type means and between-school variance figures for supports for effective schools. Each table displays results from a different unit of analysis. Table B-7 contains teacher-reported information, and Table B-8 contains principal-reported information.

Table B-5
Difference in Means, by School Type and Between-School Variance in Teacher- and Student-Reported Attributes of Effective Schools

	School Type Means			Between-School Variance			
	Preconversion	Start-up	Model	Fully Unconditional (%)	+Individual Level (teacher or student) Controls (%)	+ School Type and Individual Level Controls (%)	Percent Explained by School Type
Normative Climate							
High Expectations							
Student	-0.16[a]	0.58	0.64	20.7	20.5	8.0	60.7
Teacher	-0.16[a]	0.39	0.74	21.1	21.2	9.4	55.6
Personalization							
Teacher	-0.25[a]	1.23	0.96	48.6	48.2	15.4	68.1
Student	-0.11[a]	0.42	0.43	11.7	12.1	5.9	50.9
Respect and Responsibility							
Teacher	-0.21[a]	0.56[b]	1.11	34.8	34.4	10.9	68.4
Student	-0.19[a]	0.58	0.75	24.4	24.0	9.0	62.3
Safe and Orderly							
Teacher: Safe	-0.05	0.13	0.38	7.8	7.0	5.9	15.6
Student: Safe	-0.05[a]	0.07	0.26	4.8	4.6	3.3	26.8
Student: Orderly	-0.16[a]	0.51	0.70	18.5	19.5	6.4	67.1
Instructional Approaches							
Authentic Instruction							
Active Inquiry	-0.09[a]	0.23	0.42	9.7	9.2	7.0	24.2
In-Depth Learning	-0.13[a]	0.18[b]	0.79	22.3	19.0	8.1	57.3
Performance Assessment	-0.07	0.16	0.22	5.3	5.3	4.9	8.1
Technology as a Tool	-0.15[a]	0.27[b]	0.96	29.2	27.3	9.3	66.1
Traditional Instruction	0.11[a]	-0.40	-0.41	7.7	7.8	1.7	77.9
Standardized Test Preparation	0.17[a]	-0.51	-0.86	33.4	29.6	13.3	55.1
Teacher Professional Community							
Common Focus	-0.22[a]	0.72	0.91	29.7	29.7	6.0	79.9
Collegiality	-0.15[a]	0.43	0.64	30.0	28.3	20.6	27.2
Collaboration	-0.21[a]	0.61	0.96	26.6	24.8	2.4	90.2
Reflective Professional Dialogue	-0.24[a]	0.88	0.67	29.8	27.5	4.9	82.1
School Governance							
Decentralized Decision-making							
School Level	-0.28[a]	1.12	1.01	49.1	48.0	12.8	73.4
Classroom Level	-0.07[a]	0.38	0.26	10.3	9.6	6.8	29.1
Multidirectional Communication	-0.14[a]	0.67	0.50	37.1	37.1	30.5	17.8
Academic Organization							
Instructional Coherence	-0.23[a]	0.74	0.95	37.9	35.9	14.2	60.3

Source: Teacher survey, spring 2002, unless indicated that source is from the student survey, spring 2002.

Note: School type means are in standard deviation units from the grand mean.

[a] The mean for the preconversion schools is significantly different ($p < .05$) from the mean for the start-up and model schools combined.

[b] The mean for the start-up schools is significantly different ($p < .05$) from the mean for the model schools.

Table B-6
Frequency Counts of Principal Reports of Supports for Effective Schools, by School Type

	School Type Counts			Chi-Square		
	Preconversion	Start-up	Model	Degrees of Freedom	X^2 Statistic	p-Value
Academic Organization	N=6	N=7	N=5			
Instructional Periods						
Have formal class periods	6	7	3	2	5.9	< .10
If have formal class period, more than 50% are longer than 60 minutes	2	6	2	2	3.8	Not significant
Tracking						
All core subjects differentiated by ability	0	0	1			
Some core subjects differentiated by ability	6	3	2	4		Not significant
No core subjects differentiated by ability	1	3	2			

	School Type Means			Analysis of Variance		
				Degrees of Freedom	F-Value	p-Value
Influences from Individuals Outside of School						
State-Level Offices	3.8 [a]	2.9	2.4	2, 17	6.59	< .01
District or Chartering Organization Administrators	3.8 [a]	2.7	2.4	2,16	6.30	< .05
Local School Board	3.8 [a]	2.3	2.0	2,16	18.3	< .00
Teachers' Associations or Unions	3.0	1.5	1.0	2,10	4.10	< .10

Source: Principal survey, spring 2002.

[a] The mean for the preconversion schools is significantly different ($p < .05$) from the mean for the start-up and model schools combined.

Table B-7
Difference in Means, by School Type, and Between-School Variance in Teacher-Reported Supports for Effective Schools

	School Type Means			Between-School Variance			
	Preconversion	Start-up	Model	Fully Unconditional (%)	+ Individual Teacher Level Controls (%)	+ School Type and Individual Level Controls (%)	Percent Explained by School Type
Human and Material Capital							
Teacher Preparedness	-0.09 [a]	0.31	0.38	7.3	7.6	3.3	57.2
School Leadership	-0.09	0.41	0.35	29.6	28.3	26.2	7.5
Parental Involvement	-0.12 [a]	0.16 [b]	0.77	14.9	13.9	3.8	72.7
Instructional Materials	0.00	-0.03	0.26	29.6	31.1	33.4	-7.3
Instructional Resources	0.01	0.14	-0.18	25.6	26.0	27.8	-6.9
Community Resources	-0.12 [a]	0.36	0.57	18.2	17.3	9.9	42.8

Source: Teacher survey, spring 2002.

Note: School type means are in standard deviation units from the grand mean.

[a] The mean for the preconversion schools is significantly different ($p < .05$) from the mean for the start-up and model schools combined.

[b] The mean for the start-up schools is significantly different ($p < .05$) from the mean for the model schools.

Table B-8
Difference in Means, by School Type, in Principal-Reported Supports for Effective Schools

	School Type Means			Analysis of Variance		
	Preconversion	Start-up	Model	Degrees of Freedom	F-Value	p-Value
Barriers to Reform						
Staff, Parent and Community Support						
Parent/Community Opposition	1.8 [a]	1.0	1.2	2,17	4.89	< .05
Parent/Community Apathy	2.5 [a]	1.6	1.2	2,17	6.36	< .01
Staff Opposition	2.3 [a]	1.3	1.2	2,17	6.36	< .01
Staff Apathy	2.0 [a]	1.0	1.4	2,17	7.60	< .01
Flexibility of Resources	2.2 [a]	1.3	1.4	2,17	6.10	< .05

Source: Principal survey, spring 2002.

[a] The mean for the preconversion schools is significantly different ($p < .05$) from the mean for the start-up and model schools combined.

Do these schools also differ on key measures of student development?

Table B-9 presents the school type means and the between-school variance figures for the six intermediate student outcomes analyzed for this report.

Table B-9
Difference in Means, by School Type, and Between-School Variance in Student-Reported Intermediate Student Outcomes

	School Type Means			Between-School Variance			
	Preconversion	Start-up	Model	Fully Unconditional (%)	+ Individual Level Student Controls (%)	+ School Type and Individual Level Controls (%)	Percent Explained by School Type
Academic Self-Concept	-0.06 [a]	0.16	0.27	3.3	3.0	1.1	62.4
Engagement							
Interest	-0.10 [a]	0.38	0.43	9.6	9.0	2.2	75.8
Persistence	-0.10 [a]	0.38	0.40	9.4	9.1	3.6	60.6
Sense of Belonging	-0.11 [a]	0.42	0.38	9.7	9.3	2.5	72.9
Satisfaction							
Academic Progress	-0.08 [a]	0.24	0.39	6.1	6.0	2.4	60.3
Social Responsibility	-0.13 [a]	0.32 [b]	0.60	11.9	11.6	3.2	72.3

Source: Student survey, spring 2002.

Note: School type means are in standard deviation units from the grand mean.

[a] The mean for the preconversion schools is significantly different ($p < .05$) from the mean for the start-up and model schools combined.

[b] The mean for the start-up schools is significantly different ($p < .05$) from the mean for the model schools.

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